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# The Economies of Hellenistic Societies, Third to First Centuries BC

Zosia H. Archibald  
John K. Davies  
Vincent Gabrielsen

THE ECONOMIES OF HELLENISTIC SOCIETIES,  
THIRD TO FIRST CENTURIES BC

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Edited by

ZOSIA H. ARCHIBALD

JOHN K. DAVIES

and

VINCENT GABRIELSEN

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Great Clarendon Street, Oxford OX2 6DP

Oxford University Press is a department of the University of Oxford.  
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Published in the United States

by Oxford University Press Inc., New York

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First published 2011

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British Library Cataloguing in Publication Data

Data available

Library of Congress Cataloging in Publication Data

Data available

Typeset by SPI Publisher Services, Pondicherry, India

Printed in Great Britain

on acid-free paper by

MPG Books Group, Bodmin and King's Lynn

ISBN 978-0-19-958792-6

1 3 5 7 9 10 8 6 4 2

## Acknowledgements

The papers presented in this volume are the fruit of a conference held in the University of Copenhagen on 7–9 September 2006. Entitled ‘Demand Creation and Economic Flows’, it was master-minded and organized by Professor Vincent Gabrielsen of the University’s Saxo Institute. On behalf of all, contributors and others, who attended the conference, his editorial colleagues (Z.H.A. and J.K.D.) here express our warmest thanks and appreciation for his energy, efficiency, and goodwill. Equally warm thanks and appreciation are also due to other academic and administrative colleagues in Copenhagen for their support and participation, and for financial and other support to the Saxo Institute, the University’s Faculty of Arts, and especially the Carlsberg Foundation.

We thank the Oxford University Press for its willingness to undertake the publication of these Proceedings, and Hilary O’Shea for her helpfulness in facilitating the process. Particular thanks are due to the Press’s two anonymous readers of the initial MS, whose comments, criticisms, and suggestions were influential in yielding a much tighter and better-focused volume. Final preparation of the MS was assisted by Ms Beverley Scott with the support of a grant from the SACE Research Fund, and the maps of the Mediterranean and Aegean were prepared by Mrs Sandra Mather in the Department of Geography, whose efficiency we warmly appreciate.

For permission to reproduce copyright material published elsewhere, contributors, editors, and publishers are grateful to the following individuals and organizations: to the École française d’Athènes, for the image on the book jacket (© EfA/Ph. Collet); to Messrs J.B. Metzler Verlag 1970 for fig. 9.2; to Messrs Habelt-Verlag, Bonn, for figs. 9.1, 9.3, 9.4, and 9.5; to the Österreichisches Archäologisches Institut for fig. 9.6; to A. Hoffmann for fig. 12.6; to Niels Hannestad for fig. 12.5; sincere thanks to Sidsel West-Hansen for figures 12.1 and 12.2; to Jette Eeg for fig. 13.1, based on Fraser and Bean 1954; to Marie-Christine Marcellesi, the Deutsches Archäologisches Institut, and the Maison René Ginouvès, Archéologie et Ethnologie, for figs. 17.1–2; to Bibliopolis-Verlag for fig. 17.3; to John Lund for figs. 17.4–5; to Cambridge University Press for fig. 18.1 (page xxi in W. Clarysse and D.J. Thompson, *Counting the People in Hellenistic Egypt*, volume 2, 2006).

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## Abbreviations

Abbreviations for ancient literary sources follow *Oxford Classical Dictionary*<sup>3</sup> (1996), xxix–liv. Abbreviations for epigraphic sources follow *Supplementum Epigraphicum Graecum*, Index XXXVI–XLV (Amsterdam, 1999), 677–88. Abbreviations for periodicals follow *L'Année Philologique*.

AfO	<i>Archiv für Orientforschung</i>
AJS	<i>American Journal of Sociology</i>
AncEcon	J.G. Manning and I. Morris (eds.) (2005), <i>The Ancient Economy. Evidence and Models</i> : Stanford.
ANRW	W. Haase and H. Temporini (eds.) (1970– ), <i>Aufstieg und Niedergang der römischen Welt</i> , vols. I–. Berlin.
Aperghis	G.G. Aperghis (2004), <i>The Seleukid Royal Economy: The Finances and Financial Administration of the Seleukid Empire.</i> : Cambridge.
Approches	R. Descat (ed.) (2006), <i>Approches de l'économie hellénistique</i> . Saint-Bertrand-de-Comminges.
Austin <sup>2</sup>	M.M. Austin (2006), <i>The Hellenistic World from Alexander to the Roman Conquest. A Selection of Ancient Sources in Translation</i> . 2nd edn. Cambridge.
Bagnall	R.S. Bagnall (1976), <i>The administration of the Ptolemaic Possessions outside Egypt</i> . Leiden.
BE	'Bulletin épigraphique', in <i>Revue des Études Grecques</i> .
Bielman	A. Bielman (1994) <i>Retour à la liberté. Libération et sauvetage des prisonniers en Grèce ancienne</i> . Paris.
BIFAO	<i>Bulletin de l'Institut français d'archéologie orientale</i> .
Billows	R.A. Billows (1990) <i>Antigonos the One-Eyed and the Creation of the Hellenistic State. (Hellenistic Culture and Society 4.)</i> Berkeley and Los Angeles.
Bogaert	R. Bogaert (1968) <i>Banques et banquiers dans les cites grecques</i> . Leiden.
Bresson	A. Bresson (2000) <i>La cité marchande. (Ausonius, 2)</i> . Bordeaux.
Bugh	G. Bugh (2006), <i>The Cambridge Companion to the Hellenistic World</i> . Cambridge.
CAH <sup>2</sup>	<i>Cambridge Ancient History</i> (1970), new edn., vols. I–. Cambridge.

CEHGRW	W. Scheidel, I. Morris, and R. Saller (eds.) (2007) <i>The Cambridge Economic History of the Greco-Roman World</i> . Cambridge.
CH	<i>Coin Hoards</i> (1975–), vols. I–. London.
Chankowski	V. Chankowski (2008), <i>Athènes et Délos à l'époque classique. Recherches sur l'administration du sanctuaire d'Apollon délien</i> . (BEFAR 331) Athens.
Clarysse and Thompson	W. Clarysse and D. Thompson (2006), <i>Counting the People in Hellenistic Egypt</i> , 2 vols. Cambridge.
Emprunt	L. Migeotte (1984), <i>L'emprunt public dans les cités grecques: Recueil des documents et analyse critique</i> . Québec and Paris.
EPRO	<i>Études préliminaires aux religions orientales dans l'Empire romain</i> , vols. 1–. Leiden.
Erskine 2003	A. Erskine (ed.) (2003), <i>A Companion to the Hellenistic World</i> . Malden MA and Oxford.
Erskine 2009	A. Erskine (ed.) (2009), <i>A Companion to Ancient History</i> . Malden MA and Oxford.
ESI	Explorations and Excavations in Israel
EtTrav	<i>Études et Travaux</i> , Centre d'Archéologie Méditerranéenne de l'Académie Polonaise des Sciences, Warsaw.
Feyel	Chr. Feyel (2006), <i>Les artisans dans les sanctuaires grecs aux époques classique et hellénistique à travers la documentation financière en Grèce</i> . (BEFAR 318). Athens: École française d'Athènes.
FiE	<i>Forschungen in Ephesos</i> (1906–), vols. I–. Vienna.
Finley <sup>2</sup>	M.I. Finley (1999), <i>The Ancient Economy</i> . (Sather Classical Lectures 43.) 1st edn. London, 1973; 2nd edn. 1985, updated 1999 with a foreword by Ian Morris. Berkeley and Los Angeles.
Gabrielsen	V. Gabrielsen (1997), <i>The Naval Aristocracy of Hellenistic Rhodes</i> . Studies in Hellenistic Civilization 1. Aarhus: Aarhus University Press.
Garnsey	P.D.A. Garnsey (1988), <i>Famine and Food Supply in the Graeco-Roman World: Responses to Risk and Crisis</i> . Cambridge.
Guerre	J. Andreau, P. Briant, and R. Descat (eds.) (2000), <i>La guerre dans les économies antiques</i> . Saint-Bertrand de Comminges.
HellEc I	Z.H. Archibald, J.K. Davies, V. Gabrielsen, and G.J. Oliver (eds.) (2001), <i>Hellenistic Economies</i> . London and New York.
HellEc II	Z.H. Archibald, J.K. Davies, and V. Gabrielsen (eds.) (2005), <i>Making, Moving and Managing: The New World of Ancient Economies, 323–31 BC</i> . Oxford.

Horden and Purcell	P. Horden and N. Purcell (2000) <i>The Corrupting Sea. A Study of Mediterranean History</i> . Oxford and Malden MA.
IAA	Israel Antiquities Authority
IGCH	M. Thompson, O. Mørkholm and C.M. Kraay (eds.) (1973), <i>An Inventory of Greek coin hoards</i> . New York.
IK	<i>Inschriften griechischer Städte aus Kleinasien</i> (1972– ). Bonn.
Inventory	M.H. Hansen and T.H. Nielsen (eds.) (2004), <i>An Inventory of Archaic and Classical Poleis</i> . Oxford.
JEH	<i>Journal of Economic history</i> .
JITE	<i>Journal of Institutional and Theoretical Economics</i> .
LGPN	P.M. Fraser, E. Matthews, and others (eds.) (1987– ), <i>A Lexicon of Greek Personal Names</i> , vols. I–. Oxford.
Ma	J. Ma (1999), <i>Antiochos III and the cities of western Asia Minor</i> . Oxford.
Manning, LP	J.G. Manning (2003), <i>Land and Power in Ptolemaic Egypt: The Structure of land Tenure</i> . Cambridge.
Marcellesi	M.-C. Marcellesi (2004), <i>Milet des Hécatomnides à la domination romaine: pratiques monétaires et histoire de la cité du IV<sup>e</sup> au II<sup>e</sup> siècle av. J.-C.</i> Milesische Forschungen 3, Mainz am Rhein.
ML	R. Meiggs and D. Lewis (1969), <i>A Selection of Greek Historical Inscriptions to the End of the Fifth Century B.C.</i> (Rev. Edn 1988) Oxford.
Networks	I. Malkin, Chr. Constantakopoulou, and K. Panagopoulou, (eds.) (2009), <i>Greek and Roman Networks in the Mediterranean</i> . Abingdon and New York.
NEAEHL	Stern, E. (ed.) (1993), <i>The New Encyclopedia of Archaeological Excavations in the Holy Land</i> , vols. 1–4. Jerusalem.
ODE	J. Black (ed.) (2002), <i>The Oxford Dictionary of Economics</i> . Oxford.
OGIS	W. Dittenberger (ed.) (1903) <i>Orientis Graeci Inscriptiones Selectae</i> , 2 vols. Leipzig; repr. Hildesheim and New York, 1970.
Préaux	C. Préaux (1939), <i>L'économie royale des Lagides</i> . Brussels.
QEDem	Monographs of the Institute of Archaeology, The Hebrew University of Jerusalem, in cooperation with the Israel Exploration Society (1975–).
RC	C.B. Welles (1934), <i>Royal Correspondence in the Hellenistic Period: A Study in Greek Epigraphy</i> . New Haven; repr. Rome 1966, Chicago, 1974).



RE	A. Pauly, G. Wissowa, and W. Kroll (eds.) (1893– ), <i>Real-Encyclopädie der klassischen Altertumswissenschaft</i> .
Reger	G. Reger (1994), <i>Regionalism and Change in the Economy of Independent Delos, 314-167 B.C.</i> Berkeley.
RO	P.J. Rhodes and R.J. Osborne (eds.) (2003), <i>Greek Historical Inscriptions: 404-323 B.C.</i> Oxford.
L. Robert, OMS	L. Robert (1960–90), <i>Opera Minora Selecta: Epigraphie et antiquités grecques</i> , 7 vols. Amsterdam.
SEG	Supplementum Epigraphicum Graecum.
SEHWW	M.I. Rostovtzeff (1941), <i>The Social and Economic History of the Hellenistic World</i> , 3 vols. Oxford.
Von Reden	S. von Reden (2007), <i>Money in Ptolemaic Egypt. From the Macedonian Conquest to the End of the Third Century B.C.</i> Cambridge.
Walbank, HCP	F.W. Walbank (1957–79), <i>A Historical Commentary on Polybius I–III</i> . Oxford.
Will <sup>2</sup>	E. Will (2003) <i>Histoire politique du monde hellénistique, 323–30 av. J.-C.</i> , 2 vols. 2nd edn. Paris.



Map 1. The central and eastern Mediterranean



Map 2. The Aegean

# 1

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## Introduction

ZOSIA H. ARCHIBALD AND JOHN K. DAVIES

### I

This is the third volume in a series which reports on the progress of a project of exploration, located at the junction of a number of current avenues of scholarly endeavour in the field of economic history. The project was conceived as, and remains, that of assembling and reviewing the evidence available for economic activity in a specific but wide arena, the eastern Mediterranean and its hinterlands, during a specific but long period. That period, the so-called ‘Hellenistic’ age, is conventionally defined as stretching from the Graeco-Macedonian conquest of the Near East by Alexander the Great in 334–323 BC until the final formal Roman takeover of the entire littoral of the Mediterranean in 31 BC. The purpose of setting the project up was to contribute to the currently lively debate about the nature of the economies of the ‘Classical world’ by identifying a manageable section of that world and then testing the validity and applicability of the various models and hypotheses which have been put forward in order to characterise it. The first such model to be worked out in detail was that offered in Rostovtzeff’s magisterial three-volume survey of 1941. In it he amassed a huge amount of invaluable material, but arranged it very largely within the purely politico-military framework provided by the geographical reach of the major monarchies of the period, while using a modernizing and near-colonialist interpretative language which has not worn well. Subsequent work on ancient economic history, influenced especially by the models of social (rather than purely economic) interaction which Moses Finley incorporated in his influential book *The Ancient Economy* (1973), focused above all on ‘Archaic’ and ‘Classical’ Greece (eighth to fourth centuries BC) and on Roman Italy from the second century BC onwards. The Hellenistic region and period therefore remained in something of an interpretative backwater. Meanwhile, however, a steady stream of newly published material in all genres—sites and artefacts

from the entire region, clay tablets, seals, papyri in demotic Egyptian, Hebrew, and Greek, and inscriptions in stone or bronze—had overtaken Rostovtzeff's assemblage of evidence and offered the opportunity to revisit the period, both descriptively and interpretatively, on the basis of a much larger and more sturdily dated mass of material.

We therefore decided to initiate a new investigation of the economic activities and patterns of the Hellenistic period. In contrast to Rostovtzeff, it would be a collective task, to be pursued via periodic colloquia whose proceedings would form successive volumes.<sup>1</sup> Also in contrast, its approach would be 'bottom-up'. That is to say, it would comprise a series of detailed evidence-based studies, each focusing on a single site or polity or artefact or institution or feature, in the expectation that once sufficient such studies were available, identifiable patterns and regularities of behaviour would begin to emerge. An initial discourse at the first colloquium (Davies 2001) having set the scene, this third volume continues the demonstration that the approach adopted by the project is proving fruitful and informative.

Meanwhile, however, other scholarship has moved forward. At one level of detail, three chapter-length sketches, showing a strong family resemblance, have given the first-time reader a general outline of the economies of the Hellenistic period.<sup>2</sup> Using a different framework, the *Cambridge Economic History of the Greco-Roman World* has not only made available a detailed diachronic region-by-region survey of the Graeco-Roman world from the late Bronze Age till late Antiquity, including three chapters on the Hellenistic period, but has also provided, in its Part I: 'Determinants of economic performance',<sup>3</sup> a conspectus of the environmental, technological, demographic, and institutional contexts within which economic activity unfolded. That conspectus has taken the essential step of dissolving the matrix of description-plus-ideology inside which ancient economic history has been confined for far too long, offering instead a preliminary engagement with economic theory. Beginning with a belated recognition, at least in extensive terms, of periods of genuine economic growth,<sup>4</sup> that engagement has shared the widespread recognition among economic historians that improved performance depends

<sup>1</sup> Liverpool 1998 (now *HellEc* I) and Liverpool 2002 (*HellEc* II). Other relevant collective enterprises took place at Copenhagen 1991 (Bilde et al. 1993), Cambridge 1993 (Cartledge et al. 1997), Saint-Bertrand 2004 (Descat in *Approches*), and Rethymno 2006 (Networks: Malkin et al. 2009). The publication of the papers of a second Networks conference (Dublin 2009) is envisaged.

<sup>2</sup> Reger 2003, Chankowski 2004, and Davies 2006. More briefly, and with specific reference to the role of the state, van der Spek 2000 and Foraboschi 2000.

<sup>3</sup> Chapters 2–6 review Ecology, Demography, Household and gender, Law and economic institutions, and Technology.

<sup>4</sup> The quest to identify per capita growth, as distinct from extensive growth, will remain intractable: for a 'worked example' cf. Morris 2007: 213–31. 'Growth models' are not explored here, nor the balance between endogenous and exogenous growth.

upon the emergence of institutions and upon their effective management: with the New Institutional Economics providing that background, it is no surprise to encounter an immediate quotation from Douglass North (pp. 1–2) and a brief discussion of the Coase theorem which emphasizes that its value lies especially in ‘explaining why transaction costs are crucial to any understanding of an actual economy’.<sup>5</sup> Furthermore, while study of a second input into performance, that of sourcing and obtaining primary materials, remains at a descriptive level and has not yet been fully incorporated into the matrix of the springs of action, that of a third input, technology, has seen (at least among specialists) a radical transformation in the last twenty-five years, both at the descriptive level and in terms of an enhanced appreciation that patterns of effective demand generated horizontal rather than vertical specialization.<sup>6</sup>

An even broader general model, available at present only as a sketch (Davies 2009), has suggested that economic interaction throughout antiquity can be usefully seen in terms of one or other of three modes of behaviour. First and basic, with roots deep in earlier millennia, was subsistence mode, comprising a combination of dry farming within self-sufficient productive units with pastoralism, hunting, and fishing: a mode which itself inescapably generates patterns of landholding, inheritance, and conflict-resolution. Second, again deep-rooted in the past, lay command mode, a term which includes all transfers of resource from one ‘owner’ to another which derive from the exercise of power, however it may have been gained and wielded: a mode which in turn generates landlordism, forms of state, tithes and taxation systems, and the like. Third comes market mode, embracing such transfers or exchanges of resource as take place beyond the reach or concern of power-wielders and/or within a relationship of reciprocity and negotiation, thereby intrinsically generating price-setting mechanisms. Naturally, at any one time any one society or polity—indeed any individual—will show all three modes of behaviour simultaneously: the challenge is to apply so timeless and disarticulated a model to the circumstances of a specific region and period by identifying the nature, extent, and influence of effective demand, tracing the systems which permitted interaction between modes, and addressing the questions of how, how far, and why the balance of importance among them changed through time. It is that challenge which this volume, like its predecessors, attempts to meet. It has the advantage of being focused on the main formative period of ‘Graeco-Roman history’ (insofar as that is not an outmoded concept) and on one of the main transformative periods of Mediterranean history. It is therefore well placed to offer a study, both of model-building and of model-testing, which is located within a scholarly context of intense debate among

<sup>5</sup> Frier and Kehoe 2007:115–17 (quotation from p.117).

<sup>6</sup> E.M. Harris 2002; H. Schneider 2007, with bibliography.

specialists on the problem of how the best of traditional ‘ancient history’ can be most profitably amalgamated with the best of current economic sociology.<sup>7</sup>

## II

The activity sketched above, not to mention much other activity elsewhere,<sup>8</sup> therefore posed a dilemma: should the editorial team envisage a third conference and consequential volume fashioned in much the same ‘bottom-up’ mode, or should a more theoretical underpinning be sought for it? After all, New Institutional Economics is only one of a range of ‘postwar heterodox economics’<sup>9</sup> which have attracted economic historians of antiquity as possibly offering a helpful interpretative framework: to those which the editors of the *Cambridge Economic History* have already briefly canvassed,<sup>10</sup> not to mention neoclassical economics itself, one may add evolutionary economics,<sup>11</sup> game theory,<sup>12</sup> network theory,<sup>13</sup> historical ecology,<sup>14</sup> complex-system theories,<sup>15</sup> and theories of monetization.<sup>16</sup> Some contributors to this present volume have indeed deployed one or another of such approaches, in a welcome spirit of exploration.<sup>17</sup> However, for three reasons we felt it inappropriate to shape the volume explicitly in such a way. One reason was that economic theory is a Procrustean beast, and economic historians of Antiquity have not yet

<sup>7</sup> The issues involved are surveyed in Manning and Morris 2005*b* and in Morris and Manning 2005*a* (esp. pp. 142–53).

<sup>8</sup> The list set out by Davies 2004: 26–8 is already out-of-date.

<sup>9</sup> The phrase is taken from Samuels et al. (2003): ch. 28. The applicability of NIE is assessed at length by Bang 2009.

<sup>10</sup> *CEHGRW* 7 (development economics, institutional economics, human capital, and economic sociology). A recent conference (Washington, DC 2009) has taken further the topic of transaction costs, a central component of institutional economics.

<sup>11</sup> Tool 1988; Nelson 1994; Dopfer 2005.

<sup>12</sup> Greif 2006 (esp. Appendix A) applies it to medieval trading structures in the Mediterranean.

<sup>13</sup> Knoke and Kuklinski 1982; Granovetter 1985; Smith-Doerr and Powell 2005; further more immediately pertinent references in Malkin et al. 2009:1–11.

<sup>14</sup> Horden and Purcell 2000; De Vries and Goudsblom 2002: W.V. Harris 2006.

<sup>15</sup> Auyang 1998; De Vries 2002 (a diachronic study, rather than one steered by mathematical models).

<sup>16</sup> The processes involved, both in late Archaic Greece and elsewhere, have been widely explored in recent literature (e.g. Meadows and Shipton 2001; Schaps 2004; von Reden 2007; W.V. Harris 2008; von Reden 2010), as have responses to them (e.g. von Reden 1995; Kurke 1999). Studies of their location within modern economic theory have been less in evidence (a brief sketch in Lewis and Mizen 2000: 21–3), though relationships between ancient monetization, money supply, and credit raise major theoretical issues, addressed in two recent conferences (Rome 2008; Brussels 2009). On this topic we gratefully acknowledge advice from Sitta von Reden.

<sup>17</sup> Cf. Manning’s use of network theory, and Archibald’s report of complexity theory as it is being developed by the Santa Fe Institute.

identified the best way to harness its power. The quest is therefore still in a very experimental and exploratory stage: as Joel Mokyr has put it, 'A general theory of economic institutions is still very far away.' A second, also succinctly summarized by the same commentator, is that 'economic history is too big to be amenable for one single theory: its subject matter is all the material culture of the past':<sup>18</sup> any one theory is perforce framed at so high a level of generality that its application to the specific circumstances of the Hellenistic Mediterranean is a matter of some difficulty. Thirdly, and even more pertinently, it is easy to lose sight of the ultimate springs of action. The importance of institutions, for example, is unquestionable, both as an exogenous framework of action and as entities undergoing continuous endogenous creation and modification,<sup>19</sup> but they channel action: they do not instigate it. One does not have to follow the Austrian School down its more contentious roads in order to acknowledge the cardinal importance of what Machlup identified as its prime tenet, namely that 'Ultimately, we can trace all economic phenomena back to the actions of individuals: thus individual actions must serve as the basic building blocks of economic theory.'<sup>20</sup> Granted, the term 'individual' has here to be understood in the sense normal among economists, that it denotes any entity—single person or collective—of whom a single will can be predicated as generating an effective demand for some form of resource allocation, but it is precisely that understanding which allows the whole range of human action to be viewed, at least for present purposes, as commensurable and as unfolding within a single universe of interaction.

The wider implications of that last statement involve both the 'structure *versus* agency' debate that has characterized so much recent sociology and the extent to which the historian of Hellenistic society is constrained by ancient and modern constructed narratives which focus overwhelmingly on a handful of individuals. They, the 'kings' and their ministers, ostensibly exercised active sovereign power over wide tracts of territory and commanded an administrative and military infrastructure effective and efficient enough to carry instructions through. Insofar, therefore, as one may be tempted to write in such terms as 'The economic interests of Egypt required that . . .', the validity of such an interpretative statement will depend in part on the (usually wholly unsubstantiable) degree to which the individual can be credited with formulating it. Escape from such historiographic constraints is essential, and is possible if and only if 'individual' is taken in the economists' extended sense as the prime mover.<sup>21</sup> Three examples may serve

<sup>18</sup> Citations from Mokyr 2005: 200 and 214.

<sup>19</sup> For the exogenous/endogenous distinction in this context, cf. Greif 2006: chs. 5 and 6 and pp. 360–2.

<sup>20</sup> Cited from F. Machlup by Boettke and Leeson 2007: 446.

<sup>21</sup> But, at the other extreme, C. Schneider's repeated use of the term 'Hellenismus' (1967–9) to denote an impersonal collective which shaped developments is an unhelpful elimination of divergences in human agency.



to show both the need and the value of using the term with such an understanding: they will also serve the further purpose of revealing the common thread of demand-creation which binds together the papers in this volume.

### III

The first<sup>22</sup> involves two individual men, a would-be priest and a king. In or soon after autumn 175 BC,<sup>23</sup> on the death of Seleukos IV and the accession of his brother Antiochos IV Epiphanes, the position of High Priest at the Temple in Jerusalem was usurped by one Jason from his brother Onias III. He did so, we are told, by promising the king 360 silver T(alents) and 80 T. of other revenue, with a further 150 T. if he were allowed to set up certain institutions of a Greek-style city.<sup>24</sup> Each man had his reasons. Not only was Antiochos weakly placed politically, owing his throne to a coup at his young nephew's expense and to an accommodation with the powerful vizier/king-maker Heliodoros,<sup>25</sup> but he was also under severe financial pressure, the two final 1000-talent instalments of the indemnity imposed by the Treaty of Apamea still being due.<sup>26</sup> His predicament gave Jason, who was naturally aware of Heliodoros' earlier failure to confiscate the Temple treasures to the crown (2 Macc. 3), the opportunity to press a hellenising agenda by substantially overbidding the rate at which Judaea had been contributing.<sup>27</sup>

The political, military, and social consequences of the bargain between Antiochos and Jason, momentous though they were for Judaea and Judaism, are not of direct concern here: their economic consequences are. The episode reveals the deep logic of 'command mode', both in that the bullion

<sup>22</sup> For further contextualization of the circumstances, see Aperghis (this vol.).

<sup>23</sup> For the chronological problems, not here relevant, cf Mørkholm 1966: 41–9.

<sup>24</sup> 2 Macc. 4: 7–10, which is generally accepted in preference to the garbled narrative in Joseph. *AJ* 12.237–9. Of the vast bibliography, cf. especially Schürer 1973: 148; Millar 1978; Grabbe 1994: 277–81; Shipley 2000: 307–8 with 460 n. 119.

<sup>25</sup> Mørkholm 1966: 36 and 41–58, followed by Habicht 1989: 340–1.

<sup>26</sup> Livy's detailed report (42. 6. 6–12) of the mission of Antiochos' envoy Apollonios to Rome in winter 174/3 is taken to reflect the payment of the final instalment (Mørkholm 1966: 65). Tempting though it is to account for Seleukos IV's comparative inactivity during his reign, the evidence of his coinage shows no unusual sense of strain (Le Rider 1993).

<sup>27</sup> His source being unidentifiable, Sulpicius Severus' figure of 300 T. under Seleukos IV (*Chron.* 2.17.5) is best not pressed too hard: nor, given the problems about dating the activity of Joseph the tax-farmer (Joseph. *AJ* 12.160–222, with Bagnall 21 n. 42) can it be safely juxtaposed with the 20 T. said by Josephos to have been traditionally provided by the High Priest 'out of his own resources' (*AJ* 12.158). In any case, given the plethora of separate taxes attested in Antiochos III's letter to Ptolemaios (Joseph. *AJ* 12.138–44), the figures may not be commensurable (cf. Aperghis 166–71 and Aperghis, this volume).

resources of the Temple were being transferred out of the region without any tangible return in the form of goods or services, and in that a second-stage transfer took them even further away to central Italy. Their enforced movement and partial re-entry into circulation<sup>28</sup> did indeed eventually create demand, but in a wholly different region and via the Roman social elite, while if Onias III was correct in informing Heliodoros that the Temple treasures were deposits<sup>29</sup> (rather than dedications or the proceeds of rents, tithes, and shekel-tax), personal depositors will have been adversely affected, as well as the Temple as a collective. It is therefore immaterial whether Antiochos IV and Jason are seen literally as individuals or as agents of larger formal or informal entities. Their actions directly and adversely affected resource allocation within and beyond Judaea, impacting upon 'demand creation' all the more forcefully and negatively in the absence of any broader money-supply than M0.

Mosaics provide a second example, this time of individual action in market mode.<sup>30</sup> If questions of origin, whether Achaimenid, Anatolian, Punic, or Greek, are left aside, if the fourth-century mosaics at Olynthos, Motya, Eretria, and Pella adequately represent their epoch, and if those which were being laid at Pergamon in the middle of the second century<sup>31</sup> reflected the standard of craftsmanship and sophistication which was then achievable, the genre shows a significant level of artistic development during the two centuries from c.350 to c.150 BC. Yet its importance is not just art-historical, for it also reflects a combination of technological advance (most obviously in the adoption of tessellated mosaic) with a substantial level of resource allocation. Six aspects of the development of the genre thereby interest the economic historian.

1. It reflects a demand for craftsmen and raw materials (lead, glass, marble, faience, perhaps mother-of-pearl) which there is no reason to view as generating anything other than a free price-setting market.
2. Such raw materials will have required sourcing, processing, and transporting, processes which have far-reaching implications for the geographical impact, both within and well beyond the Mediterranean, of such demand-creation.

<sup>28</sup> 'Partial', for the 'gold' (or gilded?) vessels of 500 lb weight which Apollonios brought as gratuitous extra gifts were to stay out of circulation in temples (Livy 42. 6. 8, 11).

<sup>29</sup> 2 Macc. 3 10–12, with Fr Abel or Goldstein *ad loc.*; but it was Onias' obvious line of defence in any case.

<sup>30</sup> Basic bibliography in Robertson 1965; C. Schneider 1967–9: 2.749–52, 1095; Dunbabin 1979; Dunbabin 1999: chs 1–3; Nevett 1999 *passim*; Westgate 1999, 2002, 2007. Cf. also *New Pauly* s.v. 'Mosaic'.

<sup>31</sup> References in Hansen 1971: 368–72. The post-150 specimens at Delos (Bruneau 1972) are seen as simpler and therefore cheaper (Westgate 2002: 236).

3. At latest by the late third century the annual turnover of the 'industry' will have been far from negligible. That conclusion may be inferred both from the numbers of specimens known<sup>32</sup> and from the level of price which has to be imputed from the best surviving specimens, the latter indicator reflecting both the fees putatively payable to known craftsmen<sup>33</sup> and the likely cost of some raw materials: it is regrettable that no quantitative indication survives.
4. Though the difficulties of assigning dates to mosaic floors preclude the possibility of mapping their spread with any precision, their appearance in non-Greek and non-Punic space<sup>34</sup> must reflect—indeed is—one component of the gradual and partial homogenisation of culture which spread through the developed world in the third century.
5. With some 80 per cent of surviving examples of tessellated mosaics being located in domestic contexts,<sup>35</sup> the decision to invest in the genre was plainly being made largely by individual householders and landlords, not by civic or cultic collectives or even by royal purchasers.
6. Though current economic convention sees expenditure on housing as investment rather than as consumption, it is difficult to see expenditure on such house-mosaics as anything other than consumption, indeed as conspicuous consumption.

In all these ways the genre has an importance well beyond itself, for the behaviour which it represents, in respect of the creation of a demand, may be confidently applied to all the other genres of goods and services, tangible or otherwise, which are known from written or physical evidence to have been the object of transactions conducted in straightforward market mode by individuals.

The third example takes the argument into the field of the collective management of resources, and specifically to Halikarnassos, a relatively prosperous harbour city on the west coast of Asia Minor. At some date between 279/8 and the late 220s<sup>36</sup> its citizens put up a stone inscription to document a public debt incurred during the construction of a covered hall (*stoa*). The

<sup>32</sup> List in Salzmann 1982: 81–127, with his Karten 1–2 for geographical distribution. Ruth Westgate reports about 170 pebble mosaics to date, about 350 tessellated, and about 70 in mixed media. Our thanks to her for these figures.

<sup>33</sup> Itinerant in the usual way, to judge from the activity on Delos attested for Asklepiades of Arados (references in C. Schneider 1967–9: 2.752 n. 3).

<sup>34</sup> As in *andrones* within Greek-style houses at Arpi in Apulia (Westgate 2002: 242–3), as well as in Campania.

<sup>35</sup> Westgate 2002: 221.

<sup>36</sup> City and territory had come under the influence of Ptolemy II in 279/8 BC, alongside a series of other key locations in Karia (Bagnall 94–8; Will<sup>2</sup> 1. 140, citing SEG I 363 = IG XII 6, 95).

surviving text is incomplete, but even as it stands it tells a complex and illuminating tale. It runs<sup>37</sup>:

(1) [ - - - ] Kallikles to the treasurers, and the treasurers are to give (the monies) at once to the commissioners, and the commissioners are to give (them) to the contractors in accordance with the specifications. (2) In order that those who lend money in advance for the stoa which the people is dedicating to Apollo and King Ptolemaios may be known to all, the controllers in whose period of office the stoa was completed shall inscribe on the side wall of the stoa the names and patronymics of all those who lent in advance without interest sums of not less than 500 drachmas, adding the inscription 'These (men) gave the people interest-free monies for the construction of the stoa', inscribing first the person who gave most. (3) So that those who lent in advance may recover (their loans), they are to have assigned to them the revenues which have been earmarked for (the construction of) the council house, once the former creditors have been repaid. (4) They are also to be assigned the funds earmarked for the statues, the 2% tax and the tax for recording oaths, once the earlier creditors have been repaid. (5) They are also to be assigned from the budget one talent annually after the creditors to whom six talents were assigned from the budget have received it with interest: the surplus is to go to the budget. (6) In addition they are also to be assigned the sum raised from the stoa after the sale of the columns, the timbers, the tiles and the bricks. (7) The works contractors are to sell the columns up as far as the law-court at the same assembly-session; the purchaser is to pay the money within thirty days to the treasurers; the treasurers [ - - - ]

Five aspects need notice. First, the projects themselves, for though all were investments of public utility, they need different labels. The statues cited in §4, for unknown honorands (though King Ptolemaios is a likely candidate in view of his suzerainty over the city), were (as it were) payments towards a political insurance policy: civic goodwill needed to be made visible. The council-house (§3), like the lawcourt mentioned in passing in §7, counted as administrative infrastructure, though on analogies from elsewhere it will no doubt have made an architectural—and thereby a civic-cultural—statement as well. Yet, though the stoa (§2) carried both divine and royal signifiers, and though it too made an architectural-civic statement, it was basically as much a piece of commercial infrastructure, as a covered market and trading area, as were its counterparts all over the world of Greek culture. All three investments thus reflect some of the town's various functions as a facilitator, providing external security, internal legal order, and an allocation of improved and systematized space for commercial activity.

<sup>37</sup> *OGIS* 46 (= *Emprunt* no. 103; translation based on Austin<sup>2</sup> no. 118, with modifications). Clause numbers are inserted by us for ease of reference. It is unfortunate that so little of ancient Halikarnassos is now recoverable that the buildings mentioned here cannot be located, in spite of Vitruvius' description (2.8.11–15), though the dedicatory inscription of what was probably the stoa in question survives (ap. *OGIS* 46 n. 3). For a comparandum in debt management at Olbia, see Müller (this volume).

Secondly, the flow of finance, visible in three different streams of provision. One comprises turnover taxes (§4),<sup>38</sup> levied on the commercial activity which the city thereby had a strong interest in protecting and enhancing. A second stream, windfall income, derived from the sale of the materials of a public building (perhaps the superseded stoa) which was being demolished (§6). The third stream comprised the voluntary contribution of capital for specific projects, alike for the statues (§4), the council-house (§3) and the new stoa (§2). Notwithstanding what would have been a seriously misleading inscription on the stoa (§2), these contributions were not gifts, for they were to be repaid, with or without interest, as and when public funds allowed. Nonetheless, the lenders were to be acknowledged in visible long-term form, for they were benefitting the town while depriving themselves of immediate access to the capital pledged.

Thirdly, the management of finance. The basic financial instrument in play here, the 'loan in advance', is first attested in fourth-century Athens for military purposes, but was adopted widely for civic purposes as well, amounting to a Hellenistic version of a 'public-private partnership'.<sup>39</sup> It was safe enough, provided that the lenders were willing to trust the town's administration and that force majeure would not disrupt tax-flow. The latter consideration, no doubt widespread, helps to explain why Hellenistic cities so rarely adopted a belligerent stance, but the aspect of trust needs emphasis, for the job of administering public revenues sounds nightmarishly complicated, with so many interconnected financial components. This is, after all, a world without double-entry book-keeping or Arabic numerals and with limited access to papyrus and other convenient media for orderly accounting. Yet the text implies that the processes described were sound. There is a chain of command in place to make sure that the different contracts are managed separately, a general aspiration to transparency, and a structure wherein several separate committees of officials are checking each other. Further, someone had calculated the likely overall cost of the stoa, because that is the sum raised from the creditors, and had identified which revenues would eventually cover the repayments. There must therefore have been a set of accounts, in whatever form, to support the action plan of the inscription, for the series of different revenue sources referred to indicates that a detailed calculation was made. Priority, moreover, is sensibly given to repaying those creditors who had lent at interest, while the remaining costs could be managed with more latitude.

<sup>38</sup> On the assumption that the 2% tax was here, as elsewhere, a tax on sales and/or on imports and exports.

<sup>39</sup> *Emprunt* 380–1, with detailed and penetrating analysis by Gabrielsen 2005. The various proposed dates for the introduction of the proeisphora at Athens are surveyed by Gabrielsen 1994: 57–8.

Fourthly, the implications for demand creation and commodity flow. Though the sold-off materials (§§6–7) would no doubt be recycled, all three projects would generate extra demand. Basic materials (stone, wood, tiles, bricks) were probably procurable locally, thus minimising transport costs and reflecting a surely correct image of the Hellenistic world as comprising a huge set of largely self-sufficient cells of local interaction. Yet it is not hard to envisage gilded statues, with ivory inserts, or to postulate some use of high-quality decoration (even mosaics) within the council-house: longer-distance flows were an essential complement.

Lastly, the overall atmosphere. On the one hand the town had got itself into a complex web of debt, such that for the avoidance of fraud, chaos, or insolvency a publicly accessible record of procedure was felt to be necessary. On the other hand there was an adequate level of trust, capital was thought to be available, and there were enough people prepared to lend it to the town treasury for an indefinite period. Some provided more, some less. Those who could afford greater generosity were given pride of place on the inscribed monument, which was a prominent reminder of what was owed.

These three examples are vignettes, not in-depth analyses. Nonetheless, they serve well enough to highlight the themes of this volume, as encapsulated in the two processes—demand-creation and commodity flows—of the conference's title. They show, for instance, how demand can only be made effective through the decisions of individuals, whether of the real single person who commissioned a mosaic, of a town as the corporate individual which planned and let a building contract, or of the ruler the survival of whose regime required the satisfaction of fiscal demands. They also exemplify some of the ways in which, though effective demand might be being created within the household, its requirements generated external market-based transactions. Furthermore, they reflect short- and long-distance flows of capital and materials, the gradual spread of an improving technology, and the ability of one institution (the town as a corporate entity) to adopt another institution (the 'loan in advance' as a financial instrument) and to adapt it for the purposes of constructive investment.

#### IV

As editors, and especially in an Introduction which commends this set of studies not simply to those active in the specific field of the economic history of the pre-Islamic Mediterranean but also more widely to those who study economic activity of any area and period, we need to make four explanatory remarks. First, the creation of the papers which follow is part of an essential process of data-creation, in an area of scholarly study where information has

been proliferating with increasing intensity but where such information, however observed, recorded, and published, does not become usable data until it is encapsulated within some kind of descriptive-analytical framework. At this stage it does not matter that they may be provisional: more important is what these papers attempt to do, namely to provide such frameworks. Secondly, as in our second volume, so too in this third volume many papers attempt the very difficult task of quantifying as much data as possible. Much progress is indeed being made elsewhere in one part of the quest, i.e. estimating the total quantity of bullion which was converted into coin via identifiable (mostly royal) issues,<sup>40</sup> but virtually everything else still remains to do: readers with any post-seventeenth-century background who approach this volume will need to adjust their expectations and to accept that, though we fully recognize the primordial nature of that task, our data do not lend themselves easily even to qualitative analysis, let alone to quantification. Thirdly, without (we confess) any very specific preliminary steer to contributors, this volume focuses principally on the first half of the Hellenistic period as conventionally defined, i.e. from the late fourth century BC until the peace treaty of 188 BC between the Roman state and the Seleukid Empire made Rome a long-term participant in the affairs of the eastern Mediterranean. However, what was fortuitous is also fortunate, for it allows the separation of two processes which are all too easily seen as one. The first comprised the irruption of Graeco-Macedonian military governments, settlers, taxation systems, and institutions into the (itself far from static or enclosed) world of the Persian Empire; one task of the Hellenistic historian is therefore to attempt to map the interaction of existing developments with those which were foisted upon that world by colonialist occupation. The second process, much more nebulous, embraced all the ways in which the various cultures of the Mediterranean and its hinterland came to interact, to imitate each other, and (but only partially) to converge in what is still, as by *CEHGRW*, but very Eurocentrically and inappropriately, called the 'Graeco-Roman world'. That second process began millennia before the centuries treated in this volume and continued long after, but the conventional view that its intensity increased markedly after c.200 BC is unchallengeable, as is the evidence that cultural influences moved in all directions and that economic relationships became ever more complex. Our fourth conference and volume will therefore focus more explicitly on the second and first centuries BC, in an attempt to plot both the specific economic impact of Roman irruption (military power of course, but also investment, an ever-stronger influence on commodity flow, and a structural change in demand) and the far wider consequences of the geographical outreach in which all Mediterranean cultures and polities came to be more or less engaged.

<sup>40</sup> Cf. esp. de Callatay 1997, with a summary in de Callatay 2005.

Fourth and last, but primordial in importance, is the need to look beyond data-creation, quantification, and periodization, to the point where we think we understand what was going on. That point is as yet far distant, but the nature of what an understanding would comprise is becoming clearer. It has to take the form of a model, for only thus can the infinite number of identifiable actions with economic consequences which take place in time and space be rendered comprehensible. Moreover, even if we as historians of the comparatively remote past are not concerned with model-building for the sake of prediction and decision-making, we certainly need to acknowledge the value of the characteristics of provisionality, testability, and falsifiability which only a model can offer (for the argument see Epstein 2008). Such a model therefore has to be formulated explicitly. However, there are models and models: no small part of the handicap under which economic historians of pre-Islamic antiquity have laboured since the 1860s has been a disposition to create or to adapt from elsewhere simple—indeed simplistic—models which are predicated on assumptions of uniformity or linear development, and thereby utterly fail to accommodate diversity and multi-dimensional change. Nor, frankly, with their assumptions of rationality, of perfect knowledge, and freely made decisions reached within a stable price-setting context, have economists themselves been as helpful as they should have been: no economic historian of antiquity can regard such assumptions as anything other than fantasy.<sup>41</sup> Fortunately, economics is a house with many mansions, and some of the less orthodox currents of analysis are proving attractive and helpful within the present debate among ancient historians. One current in particular deserves explicit mention, namely that which the Santa Fe Institute has been exploring since its 1987 conference under the general title ‘The economy as an evolving complex system’.<sup>42</sup> In the words of the manifesto of the second conference, ‘The complexity approach . . . sees economic activity as continually changing—continually *in process*. The interacting agents are typically heterogeneous, they must cognitively interpret the problems they face, and together they create the structures—markets, legal and social institutions, price patterns, expectations—to which they individually react. Such structures may never settle down. Agents may forever adapt and explore and evolve their behaviors within structures that continually emerge and change and disappear—structures these behaviors co-create.’<sup>43</sup> However, while the papers in this volume as sketched below reflect and illustrate that sketch in detail, they do not yet offer worked-out examples of viable models,<sup>44</sup> whether of flows, or of intersecting fields of forces, or of mental

<sup>41</sup> Cf. North 1997 for an analogous critique.

<sup>42</sup> Respectively Anderson and Arrow 1988; Arthur et al. 1997; and Blume and Durlauf 2006.

<sup>43</sup> Arthur et al. 1997: back cover—more lucid and direct than the editors’ own preface.

<sup>44</sup> But the models sketched by Krugman 1997 may well be applicable, as may some of those presented in the papers published in Manning and Morris 2005a.



constructs, in sufficient detail to allow us to map the polycentric, boundless, and rapidly changing economic world of the Hellenistic Mediterranean. There is still much work to do.

## V

Nonetheless, much is here already well begun, in complex ways which reflect the structural inappropriateness of seeking to impose one grand meta-narrative. As with *HellEc I* and *HellEc II*, much of this volume comprises the systematic assemblage of the economically relevant evidence for a single entity, whether a region (Syria-Palestine) after the Seleukid conquest of c.200 BC seen in its fiscal (Aperghis) or settlement (Hannestad) aspects, or a single city-state such as Ephesos (Davies), or a single aspect of a single city-state, as with the grain-production of Kyrene (Bresson) or the wine-production of Rhodes (Lund), or even with the implications of a single document (Müller). Yet all contributors recognize that the general is contained in the particular, and explicitly broach wider themes accordingly.

Thus, for example, *regions*, *regionalism*, and *regional economies* feature prominently. That four contributors focus on Egypt (Criscuolo, Manning, Thompson, von Reden), albeit in very different registers, reflects its status as a major, easily identifiable fiscal and economic entity, even though many of the developments which they describe reflect its *lack* of autarky and its consequent economic need to engage externally by land and sea. Similarly, van der Spek's brief sketch of the other riverine macro-region, Mesopotamia, brings out the same tension between autarky, exchange, and fiscal impact. Significantly, however, the long-running theoretical debate among geographers, How does one identify a region?, is joined most explicitly in Reger's discussion of the eastern Aegean, where regional boundaries are much harder to identify. He shows the possibility of supplementing the criteria normally applied by invoking patterns of individual behaviour as reflected by coin- and other artefact-distribution patterns.

Other contributors discuss the components of production, i.e. materials, manpower, and money. Of these, *materials and resources* present least interpretative difficulty, in a world agreed on all sides to show a mainly agrarian-pastoral economy: grain (Bresson, Criscuolo), domestic animals (Thompson), provisioning in time of war (Chaniotis), wine (Lund), or ceramics (Lund, Reger) are alike straightforward, only provisioning and the procurement of African elephants for war purposes (Manning) offering harder logistic challenges. Not, importantly, that such an economy was thereby static, for von Reden sketches changes in the production profile of Egypt, driven by demand on the part of settlers for certain products as social signifiers. Egypt will not have been unique.

The second component, *manpower*, carries with it issues of *movement and mobility* which run throughout the volume. They are traced at all levels, ranging from the introduction of slave labour in late Hellenistic Phrygia (Descat), through managed processes of colonialist settlement in Koile Syria (Hannestad) and Egypt (von Reden, Criscuolo, Thompson) and the measures taken both by royal regimes and by civic polities to attract economically useful human resources (Archibald, Davies, Oliver), to the ambivalences inherent in the fluctuating availability and deployment of mercenaries (Chaniotis, Oliver). Two interconnected chapters (Archibald, Oliver) place the theme within wider comparative and analytic perspectives which reflect awareness that, like other worlds and periods, the Hellenistic world was one of incessant movement, rendered ever easier as infrastructures developed and as recognition of foreigners' statuses and privileges (Gabrielsen) offered greater legal protection.

Even so, it is the third component, *money*, which sets up the widest resonances, for the economies of the whole Hellenistic world were profoundly affected by, first, Alexander's rapid transformation into coin of much of the bullion accumulated by the Achaimenid Persian Empire, and then by the need of the Successor regimes to maximise revenues, to receive them in coined silver, and to use and display that silver as at once instrument and symbol of power. Specific aspects of this *monetization process* are explored for Egypt (Criscuolo, von Reden), Palestine (Aperghis), Mesopotamia (van der Spek), and Olbia on the Black Sea (Müller). More generally, virtually all chapters reflect the transformation which monetisation gradually wrought in creating and shaping patterns of demand, whether on the part of royal regimes with their taxation demands, by civic polities in managing their budgets (Gabrielsen, Mueller), by individuals (von Reden and p. 5 above), or by warfare (Chaniotis, Manning).

Of course, themes other than 'production' also emerge. One, already implicit above with Halikarnassos and already broached in the title of *HellEc II*, is *management*, whether in terms of the goals and techniques attributable to *privati* for their own properties (Criscuolo and especially Chandezon) or of those deployed by polities. The management of temples, sanctuaries, and their assets attracts straightforward attention (Chankowski, Davies), while a more complex and very significant theme, emerging (we acknowledge) unexpectedly, has been that of the *collaborative management* of both assets and crises. For Olbia, collaboration between benefactor and polity averted a liquidity crisis (Müller): for Kyrene, collaboration between polity and producers balanced the goal of maximum price against the risk of depressing a local market (Bresson): for the Hellenistic world in general, collaboration between ruler, city, merchants and shippers (especially via tax exemptions) generated local monopolies which were functional both in reducing transaction costs and in maximising safe transits (Gabrielsen).

Such approaches link description with theory. References to theories of monopoly (Gabrielsen), of agency (Davies), of networks both intensive and extensive (Archibald, Manning, Oliver), or of the spread of institutions and sophisticated financial instruments outwards from late Classical Athens (many contributors), all reflect aspects of current scholarly convergences, not merely between the study of ancient and of more recent economic history but also between them, social theory, and economic anthropology. In all these ways the Hellenistic world is proving to be a fruitful laboratory for such exploratory work: we hope to take it further forward.

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## Jewish Subjects and Seleukid Kings: A Case Study of Economic Interaction

G.G. APERGHIS

The primary sources for the history of the Jews under Seleukid rule are almost exclusively Jewish, principally 1 and 2 Maccabees. Josephus' *Jewish Antiquities* relies on 1 Maccabees in most matters that affect this chapter, while the Book of Daniel provides some additional information. The focus of attention of these sources has naturally been political, cultural, and religious history, especially the Maccabean revolt and its aftermath, which eventually led to the formation of an independent Jewish state. No doubt this was of greater interest to their readers than the more mundane subject of economic interaction between a governing power and its subjects, but it will be of interest to study this too. Indeed one's perspective is rather broader, since comparative evidence can be used from other regions of the Seleukid Empire and periods.<sup>1</sup>

The Jewish heartland, Judaea, was incorporated into the empire c.200 BC,<sup>2</sup> when it was taken from the Ptolemies by Antiochos III. It became truly independent only after 129, following the death of Antiochos VII. Thus, for about seventy years, there was close contact between Seleukids and Jews, which occurred mostly in Judaea, the region I will be concentrating on, although Jews lived in other parts of the empire too—in Samaria and Galilee, in Peraea across the Jordan, in Idumaea and the Canaanite coastal cities, but also in Babylonia, northern Syria, and Asia Minor.

It will first be necessary briefly to describe the economy of Judaea and evaluate its potential for supplying tribute, taxes, and services to a governing power. How these were then extracted from the subject population at different times, in what forms and at what levels will be the main topic. But the Seleukids also provided benefactions in return and this too will be

<sup>1</sup> Comparative evidence from the Seleukid Empire is provided in more detail in Aperghis, where other references are given also.

<sup>2</sup> All dates that follow are BC.

examined. Finally there will a brief reference to the Jews in other parts of the Seleukid Empire.

## POPULATION

The starting point must be the population of Judaea, since this is a key determinant of any ancient economy. For the hill country centred on Jerusalem, approximately 2,000–2,500 square kilometres in extent, a rough population estimate can be made using four independent approaches.

The first is to compare with a similar region elsewhere. Attica, for example, in the fifth and fourth centuries BC, was not unlike Judaea in area (2,500 square kilometres), terrain and climate, but probably more populous because of the importance of Athens as a centre of commerce and empire. Population estimates for Attica in this period range between 150,000 and 300,000 inhabitants.<sup>3</sup>

An estimate of the population of Judaea can also be based on the maximum recruitment capability of the Jews during the Maccabean revolt, which seems to have been between 20,000 and 40,000 men according to Bar-Kochva, who extrapolates to a total population of between 200,000 and 400,000. The higher figure is presumably when the Jewish army was larger during the later stages of the revolt, at which time more territories had been added to Judaea (see below) and Jewish populations had been brought in from elsewhere for their safety.<sup>4</sup>

A literary reference provides a third estimate. The Seleukid official Nikanor is said to have calculated that he could raise the 2,000 talents still remaining of the indemnity owed to the Romans following the battle of Magnesia (190) by enslaving the Jews of Judaea and selling them at ninety persons to the talent (2 Macc. 8:10–11). This would require 180,000 prisoners. Presumably Nikanor had a fair idea of the total population—head taxes having been applied in Judaea in this period (see below)—and could make allowances for those who would escape or be killed.

Finally, an Ottoman census of 1877–8 showed 232,645 inhabitants for the *sanjak* of Jerusalem, whose territory essentially corresponded to that of Judaea.<sup>5</sup>

These four independent approaches all seem to point to a population figure of around a quarter of a million inhabitants for Judaea in the Seleukid period.

<sup>3</sup> e.g. Garnsey 89–91; Gomme 1933: 26; Hansen 1999: 90–4.

<sup>4</sup> Bar-Kochva gives two separate estimates: 200,000 (1977: 167–70) and 400,000 (1989: 56), which are difficult to reconcile.

<sup>5</sup> McCarthy 1990: 7–10.

## ECONOMIC ACTIVITY

The economy of Judaea was based almost entirely on agriculture (principally grain, oil, and wine) and animal husbandry, although three special products were also produced that were of interest to the governing power: balsam from Jericho and salt and asphalt from the Dead Sea. Dry-farming seems to have been practised mainly by small independent farmers, but the concentration of land ownership into larger estates owned by the Jewish upper classes had led to more tenancies, debt bondsmen, and day workers, causing tensions, as noted by Jesus ben Sirah (Ecclesiasticus) writing c.180, who bemoans this concentration of wealth.<sup>6</sup> There are no references to royal land in Judaea or to land that had been assigned to Greek colonists or for the founding of Greek cities. The exceptions, possibly, were the balsam groves of Jericho, located in *paradeisoi* of the Achaemenid kings that were probably taken over by their Ptolemaic and Seleukid successors.<sup>7</sup> Local trade was centred on Jerusalem, the major urban centre, which, despite its prominence in literary sources, was probably a relatively small city, located as it was off the main coastal and inland trade routes for inter-regional and long-distance trade. The industry and trade of Jerusalem were dependent mainly on the Temple and the requirements of its cult, but also served, to a smaller extent, the specialised needs of the rural communities of Judaea. All Jews were expected to offer annual contributions to the Temple and make pilgrimages to Jerusalem for the great festivals, but pilgrimage really became important later, during the Hasmonean and, especially, Roman periods, when it fuelled the growth of the city.<sup>8</sup>

From the point of view of Antiochos III c.200, Judaea must have appeared quite a minor province of his empire, representing probably not more than 2 per cent of the population and contributing about as much to the royal treasury.<sup>9</sup> It is not surprising therefore that it hardly ever appears in Greek sources. Later, however, the Seleukids lost territories in Asia Minor and the East, culminating in the first crushing loss of Mesopotamia c.140 to the Parthians, briefly recovered later and then conclusively lost in 129. At the same time the Jews were expanding their control within and beyond the borders of Judaea and playing a more important role in Seleukid affairs.

<sup>6</sup> Tcherikover 1959: 42.

<sup>7</sup> Rappaport, Pastor, and Rimon 1994: 76–7.

<sup>8</sup> Hengel 1981: 6–57; Rappaport, Pastor, and Rimon 1994: 79.

<sup>9</sup> The total population of the Seleukid Empire just before the battle of Magnesia in 190 has been estimated by Aperghis (57) at between fourteen and eighteen million inhabitants.



## CIVIL AND FINANCIAL ADMINISTRATION

After the Seleukid takeover from the Ptolemies, the newly acquired satrapy of Koile Syria and Phoenicia seems to have been administered with a slightly different organization to that of the other satrapies of the empire. Perhaps this was a Ptolemaic residue or simply because of the disparity of the peoples of the region. In any case, the normal Seleukid hyparchy, as a subdivision of the satrapy, is not attested here in the sources. Instead, one has the meridarchy, of which there were probably four.

It appears that in the Seleukid Empire, the chief financial officer of a satrapy, the *dioikētēs*, was independent of the satrap and reported directly to the king. In the newly conquered satrapy of Koile Syria and Phoenicia, however, there seem to have been certainly two named *dioiketai* at the time of Antiochos III and probably four, with whom the king corresponded directly. This would probably place each in command of the financial administration of a meridarchy, cooperating with the respective civil/military meridarch in matters of joint jurisdiction.<sup>10</sup>

It is difficult to determine precisely where these meridarchies were located. A meridarch is recorded for Samaria (Joseph *AJ* 12.261, 264, 287). This official, Apollonius, attempted to contain the initial outbreak of the Macabbean revolt at Modin, which was then part of Samaria. The governor of Idumaea, Gorgias, was later given the responsibility of subduing the Jews, when the revolt had taken fire in Judaea proper, which implies that Judaea probably belonged to his area of jurisdiction (2 Macc. 10: 14; 12: 32). Gorgias is also noted as defending the city of Jamnia in the coastal plain south of Ake-Ptolemaïs (1 Macc. 5: 58–9; Joseph *AJ* 12.351). Later, a governor, Hegemonides, was appointed for the area (2 Macc. 13: 24), which suggests that he had probably taken Gorgias' position. So far then, two meridarchies may have been identified and one can reasonably add to their territories the sparsely populated regions directly across the Jordan and the Dead Sea. This leaves Phoenicia, north of Ake-Ptolemaïs, as a likely third meridarchy. A large administrative centre has been excavated at Kadesh in Upper Galilee, which would have been a convenient site on royal land, since the coastal trip was fully taken up by the Phoenician cities.<sup>11</sup> And finally a fourth meridarchy could be postulated in what is today southern Syria. The governor of the entire satrapy of Koile Syria and Phoenicia was apparently based at Ake-Ptolemaïs.

Another pointer to four meridarchies is the dowry provided by Antiochos III for his daughter Kleopatra, which apparently comprised the whole of the former Ptolemaic territories. This dowry is noted as including Koile Syria, Samaria, Judaea (in one manuscript Idumaea) and Phoenicia (Joseph *AJ*

<sup>10</sup> Aperghis 269–77, 280–1.

<sup>11</sup> Herbert and Berlin 2003.

12.154), corresponding quite well with the meridarchies noted above. And, finally, Strabo (16.2.4) mentions the four 'satrapies' into which Koile Syria and Phoenicia were divided, probably implying four earlier meridarchies.

The next level of subdivision within a meridarchy seems to have been a toparchy and one hears of the existence of officials named 'in charge of *topoi*', i.e. civil/military toparchs, who cooperated with financial officials, *oikonomoi*, the immediate subordinates of the *dioikētai*.<sup>12</sup> A transfer of three southern toparchies of Samaria (Aphairema, Lydda and Ramathaim) to Judaea, along with their revenues, is noted at a time when a Seleukid king, in a position of weakness because of dynastic strife, was vying for support from the Jewish high priest (Joseph *AJ* 13.129).

It seems clear that the toparchy, comprising a number of *topoi* or villages, was a basic fiscal unit in rural areas of the Seleukid Empire. A city and its surrounding land (*chōra*) were another such fiscal unit.<sup>13</sup> What is not immediately clear, however, is whether the Judaeian heartland itself was divided into toparchies or whether it was treated as the land (*chōra*) of its one and only city, Jerusalem. This will be examined shortly.

One thing, however, is probable, at least in the reign of Seleukos IV (187–175), which is that a Seleukid official kept an eye on the finances of the Temple of Jerusalem. One Simon is recorded as the 'supervisor of the sanctuary' (*prostatēs tou hierou*), who brought charges against the Temple authorities (see below). This function is known, sometimes with different names, from other major sanctuaries of the Seleukid Empire and was perhaps common to all. An *epistatēs* supervised the Artemision sanctuary of Amyzon in Asia Minor; a *prostatēs* is also referred to there; a *paqdu* was the king's representative in temples of Babylon and Uruk; a *pu-ru-su-tat-te-su* (*prostatēs*) is also recorded for a Babylonian temple from the Parthian period.<sup>14</sup>

Another official mentioned in Jerusalem is the *agoranomos*, a feature of any Greek city in this period, the person who supervised the workings of the marketplace. Simon, the 'supervisor of the sanctuary', had apparently wished to exercise the *agoranomos* function in place of Onias, the high priest (2 Macc. 3: 4). Obviously there was some advantage to be gained. From an inscription dating to the end of the fourth century BC involving Antigonos Monophthalmos and the cities of Teos and Lebedos in Asia Minor, one can see that the duties of an *agoranomos* of a subject city may have been broadened to the collecting of tolls and sales taxes on behalf of the king for goods transported to and from the city.<sup>15</sup> It is quite possible then that Simon and Onias were vying for the role of tax contractor.

<sup>12</sup> Aperghis 269–73, 277–81.

<sup>13</sup> For Seleukid taxation, in general, see Aperghis 137–79.

<sup>14</sup> Aperghis 284, 287–9; Schäfer 1995: 34.

<sup>15</sup> Aperghis 285; Welles 1934: no. 3.

## TRIBUTE AND TAXATION

One can now examine the evidence for Seleukid economic exploitation of Judaea in the period 200–129.

## Antiochos III (223–187)

After his conquest of Judaea, Antiochos ordered, in a letter to his general Ptolemaios, amongst other things, tax relief for Jerusalem, which had suffered during the war (Joseph *AJ* 12.138–44).<sup>16</sup>

For the transportation from Judaea, other regions, and Lebanon to Jerusalem of timber and other materials that were necessary for the repair of the Temple, no duty (*telos*) was to be imposed. This would imply that a toll was normally levied for certain goods at the city gates of Jerusalem, at the borders of the province of Judaea and at the exits of the royal forests of Lebanon.<sup>17</sup> There is no indication here that the timber would actually be provided free of charge by the king. What this also seems to point to is that Judaea was not treated as the *chōra* of Jerusalem, but taxed independently.

Three head taxes seem to have been applied and some sections of the population were to be exempted. The first head tax was a crown tax (*stephanitikos phoros*), originally a golden wreath presented to a royal benefactor that may have been discontinued in favour of a fixed annual contribution in coin or, sometimes, simply augmented by such a contribution, as was the case of the Jews with regard to Demetrios II (1 Macc. 13.39, see below). The second head tax was a salt tax (*peri tōn halōn*). How exactly this was applied is not clear, but it is likely, from the evidence of Mesopotamia, where a similar tax is noted at both Seleucia-Tigris and Uruk, to have been a requirement to purchase salt from a state monopoly, with a tax added to the sales price.<sup>18</sup> Presumably the Dead Sea would have been the main source of this salt in Judaea. The third head tax is rather generally described in the plural as 'those which they are liable to as head taxes' (*hōn huper tēs kefalēs telousi*). This might suggest a range of different taxes or, more probably, a head tax which was set at different levels depending on the population category.<sup>19</sup> If certain sections of the population were being singled out by Antiochos for tax

<sup>16</sup> Bikerman 1935. For this document and translation see also Aperghis 328–9.

<sup>17</sup> Bikerman 1935: 16.

<sup>18</sup> Aperghis 154–6.

<sup>19</sup> Bikerman considered that possibly referred to are different head taxes according to local customs (1935: 18). Tcherikover noted, as an example, the half shekel paid annually by each Jew to the Temple for the daily rites (1959: 155). But this is unlikely, in my view, because Antiochos had clearly stated that he would not interfere with local customs. Also Aperghis 164–6 for head taxes in the Seleukid Empire in general.

exemption, it probably means that specific population categories had already been identified and taxed accordingly. A general head tax would normally be called an *epikephalaion*, while a tax on artisans would be a *cheironaxion* or *cheirotechnion*.

A three year exemption from taxes (*ateleia*) was to be granted to the inhabitants of Jerusalem and all those who returned to the city by a certain date. This probably does not include the head taxes already mentioned, since the concession to the Jewish ruling classes would then have been of no value. So one must suppose that the taxes implied here are those that were normally levied within the city for legal and economic transactions, e.g. sales taxes, registration fees etc., which are attested elsewhere in the Seleukid Empire.<sup>20</sup>

The same inhabitants of Jerusalem were being granted a permanent one third reduction in tribute.<sup>21</sup> There is a problem here, since it has generally been assumed that tribute was applied as an annual sum to a collective entity, e.g. a Greek *polis*, a village in royal land, a temple, a dynast, an *ethnos* or nation, which in turn distributed the burden amongst its members as it saw fit. Now it was noted earlier that tolls were applied at the gates of Jerusalem for timber arriving from the rest of Judaea. It seems clear then that what is meant in Antiochos' letter is the tribute of Jerusalem, not Judaea. The text reveals that the Jews were indeed considered an *ethnos*, but apparently only insofar as their own laws and customs were concerned. From a fiscal point of view, however, Judaea was probably subject to the Seleukid financial administration like any other province in the empire, with a tribute assessment on its principal city, Jerusalem, and separate assessments on other towns and villages, along with a wide range of taxes.<sup>22</sup> Tribute assessment on villages and even individual plots of land (*klēroi*) is noted elsewhere in the Seleukid Empire.<sup>23</sup>

There is not a single tax concession in Antiochos' letter for the rest of the population of Judaea, unless a few members of the Jewish ruling classes, who benefited from the head taxes exemption, happened to reside in the countryside. Indeed it is very probable that Judaea would continue to pay tribute, assessed on its towns and villages, as well as head taxes and transaction taxes. When later (see below) three rural districts of Samaria were transferred to Judaea, it can only mean that their taxation revenue was also transferred, which implies that it had been assessed at the level of district (toparchy). Perhaps, most important of all, taxes on agricultural production and animal husbandry are not mentioned in Antiochos' letter, not because they were not

<sup>20</sup> Aperghis 157–63.

<sup>21</sup> But Hahn takes this, along with the previous concession, as tribute remitted for three years and then reduced by one-third (1978: 18).

<sup>22</sup> Also Schäfer 1995: 29. Bickerman (1988: 126) and Kreissig (1978: 73), on the other hand, consider that tribute was paid collectively by all Jews as an *ethnos*.

<sup>23</sup> Aperghis 137–9.

applied, but simply because they did not affect the city of Jerusalem so much as the countryside (for these taxes, see below).<sup>24</sup> Since the only tolls suppressed were for building materials entering Jerusalem for the repair of the Temple, including those from the rest of Judaea, one must suppose that tolls on all other goods, e.g. agricultural produce, would still be levied at the city gates and the borders of the province.

In this light, Antiochos' gesture does not appear to have been quite so generous. In the position of strength in which he found himself c.200, the Seleukid king had no particular need to make concessions. Antiochos' decisions regarding the Jews were probably based on short-term political and financial considerations. The main beneficiaries were to be the Jewish ruling classes and the Temple, whose political support was desirable and would be paid for by the concessions. The rest of the population of Judaea was, in this respect, to be ignored. As for the Temple, it was central to the economy of the province. By repairing it and, in particular, its commercial porticoes and providing temporary relief from a number of transaction taxes in the city, the economy of Jerusalem could be stimulated. After three years, when the tax exemption no longer applied, Jerusalem would be expected to produce a satisfactory return for the royal treasury. There was also likely to be an improvement in the revenue-generating capacity of the remainder of Judaea, as the city's economy, with which it was closely linked, grew stronger. A close parallel is to be found in Antiochos III's treatment of Sardeis after the damage suffered in his war with the usurper Achaïos (216–213).<sup>25</sup>

### Seleukos IV (187–175)

In the reign of Seleukos IV the tribute and taxes of Judaea are said to have amounted in total to 300 talents a year (Sulpicius Severus, *Chron.* 2.17.5). Either this is an estimate or, more probably, a lump sum promised by a tax contractor. Evidence for tax farming in Judaea and, indeed, the whole of Koile Syria in the Ptolemaic period is provided by the story of the Tobiads, Joseph and his son Hyrcanus. There is some problem with the dates, as Joseph purportedly received his initial contract from Ptolemy IV and died during the reign of Seleukos IV, after 22 years as tax collector. But it is more probable that his career and that of Hyrcanus were entirely pre-Seleukid.<sup>26</sup> One can certainly date the dispute of Simon and Onias over the *agoranomos* function,

<sup>24</sup> Also Avi-Yonah 1978: 220–1. Bickerman accepts the possibility of some kind of proportional tax on agriculture (1988: 126–7).

<sup>25</sup> Aperghis 326.

<sup>26</sup> Bickerman 1988: 120–1.

however, to the reign of Seleukos IV and this was quite possibly a case of tax contracting, as seen earlier.

### Antiochos IV (175–164)

The next reference to taxation is when tax farming contracts were awarded by Antiochos IV to two Jewish high priests. Onias had earlier acquired the right to collect the taxes of Judaea, presumably the 300 talents annually mentioned above, but was outbid by Jason, who ‘promised the king 360 talents, plus 80 more for any other revenue’, but the nature of this other revenue is unclear from the text (2 Macc. 4: 8). Possibly the larger amount comprised tribute and taxation on land, while taxes on people, animals, and commercial and legal transactions made up the smaller amount, which was perhaps what the *agoranomos* was supposed to collect.<sup>27</sup> Three years later, c.172, Menelaos exceeded Jason’s offer by 300 talents (2 Macc. 4: 24), but does not seem to have been able to meet his quota (2 Macc. 4: 27), which suggests that the fiscal capacity of Judaea had probably reached its limit at 440 talents annually. When compared to a population of roughly a quarter of a million, this works out at slightly more than one and a half talents per thousand inhabitants, which is about the same rate of taxation to be found in other parts of the Seleukid Empire.<sup>28</sup>

### Demetrios I (162–150)

Fiscal matters come up once more c. 150, when Demetrios I made many promises to the Jews (Joseph *AJ* 13.49–53; 1 Macc. 10: 25–45). His situation was quite unlike that of Antiochos III, in that he found himself in a position of weakness, in need of Jewish support against his rival, Alexander Balas. The major difference from Antiochos is that there was to be no special treatment of Jerusalem, as what was being offered by Demetrios applied to the whole of Judaea, including recently added toparchies from Samaria. Demetrios was compelled, so to speak, to lay his cards on the table and one can thus obtain a full view of the range of taxation in Judaea at this time.

With regard to tribute and taxes, the text reads: ‘... For I will free you from most of the tribute (*phoroi*) and taxes (*suntaxeis*) that you paid to the kings before me and to me personally. And now I free you from the tribute you always paid. In addition (*pros toutois*), I exempt you from the salt tax and the

<sup>27</sup> Abel regards the 80 talents as relating specifically to the collection of customs duties and tolls (1949: 331).

<sup>28</sup> Aperghis 248–51.

crown tax that you offered me, and I exempt you from this day on of the value of the third part (*anti tōn tritōn*) of the grain crop and the half of the fruit crop which was my due . . .’

In Demetrios’ letter, immediate exemption was to be granted both from tribute and the proportional tax on agriculture. The word *anti* is used here, to be translated, in my opinion, as ‘in place of’, ‘the value of’ and understood as the equivalent value in silver of the amount of the commodity concerned that was to be collected as tax.<sup>29</sup>

It is quite certain that there were two different tax burdens, as the tithe on agriculture is linked to the tribute with *pros toutois* (‘in addition’, ‘on top of this’). This helps reinforce the idea that a proportional tax on agriculture also existed under Antiochos III, but was not relieved, and is what Greek inscriptions show as possibly being standard fiscal practice in the Seleukid Empire for revenue from land, i.e. a tribute (*ekphorion*) on a subject community plus a proportional tax (*dekatē*) on its agricultural produce.<sup>30</sup>

Demetrios also promised relief from the ‘price of the salt pan(s)’ and ‘the price of the crowns’ and, separately, ‘from the head tax on each person, whatever was owed to me’. These are exactly the same head taxes from which Antiochos had exempted only the Jewish upper classes earlier and confirms that there were indeed three. In fact, the phrasing of the last head tax does suggest that different rates may have been applied to different sections of the population.

Continuing with Demetrios’ promises, Jerusalem, up to her boundaries, was to be relieved of the *dekatē* and the *telē*. Freedom from *telē*, i.e. sales and transaction taxes, within the city probably matches the exemption granted earlier by Antiochos for three years, but the use of *dekatē* is puzzling. The terminology might suggest a proportional tax on agriculture for Jerusalem, but this would be absurd if it had been abolished in Judaea as a whole. In any case, the terminology used previously for the agricultural tax is quite different and it is more likely that the *dekatē* was specifically a toll, to be distinguished from the sales and other transaction taxes in the city.<sup>31</sup> It had not been mentioned in Antiochos’ earlier letter simply because no general relief from tolls at the city gates of Jerusalem had been granted then, but only on materials for the repair of the Temple, and so one presumes that for goods crossing the frontiers of Judaea, Demetrios had continued to levy tolls.

There was also ‘to be no requisitioning of the animals of the Jews’, while the Sabbaths and feast days, and also three days before each feast day, were to be

<sup>29</sup> Also Goldstein 1976: 402, 406–7.

<sup>30</sup> Also Schäfer (1995: 54), *contra* Mørkholm, who suggests that Antiochos IV introduced fixed tribute and then replaced it with proportional land taxes (1966: 145–6). Freyne considered that land taxes replaced tribute after the Maccabean revolt (1980: 185–6). For the Seleukid case, see Aperghis 137–52.

<sup>31</sup> Also Bickerman 1938: 115–17; Goldstein 1976: 408.

free of taxes. These taxes are likely to have been dues for holding a commercial fair (*panēguris*) and sales taxes associated with the fair, much as happened elsewhere in the empire.<sup>32</sup>

There is, finally, the case of the liberated Jewish captives (1 Macc. 10: 33), who would be freed of tax along with their animals. There are two possible interpretations: either exemption from a head tax and a tax on animals or, more probably, from tolls on persons and animals, when these Jews travelled back to Judaea.

### Demetrios II (145–140, first reign) and later kings, to 129

In a position of weakness once more, yet another Seleukid king, Demetrios II, sought support from the Jews. It is likely that Demetrios I's earlier promise had not been fulfilled, since the high priest, Jonathan, seems to have preferred to side with Demetrios' rival Alexander Balas (1 Macc. 10.47). This time Jonathan's request was that Judaea and the attached three districts of Samaria be made tribute-free (*aphorologētos*) in return for 300 talents (1 Macc. 11: 28). There is a question here of what this means, whether a lump sum or an annual payment. Freedom from tribute (*aphorologēsia*) was often granted to Greek cities subject to the Seleukid empire as a symbolic sign of independence,<sup>33</sup> although the kings could still derive considerable revenue from taxes on agriculture, trade, industry, people and animals. In the case of the Jews, the 300 talents should not be interpreted as a one-off payment, but as so much per year to be paid by the Jewish high priest as tax farmer in place of all these other taxes.<sup>34</sup> The previous total of Seleukid taxation for Judaea had been set at 440 talents annually, according to Jason's offer, ignoring Menelaos' wild counter-offer of 740 talents. The 140 talents reduction achieved by Jonathan may well have been the tribute being exempted by Demetrios.

It is not surprising that this tribute amounts to somewhat less than one third of the earlier taxation total or even less, if Menelaos is considered. Subject communities of the Seleukid empire do not seem to have been heavily burdened by tribute, as this was a fixed sum set at perhaps only one twelfth of the assessed value of the community's annual revenue from agriculture, animal husbandry and other activities. It was the proportional taxes on agriculture that often made the burden heavy—and these had amounted at one time in Judaea to the value of one third of the grain crop and one half of the fruit crop (see above). Some have considered this a very heavy burden, punitive taxation in fact, due to the Jewish uprising, but this may not be so, since a 50 per cent rent or tax on agriculture is attested elsewhere

<sup>32</sup> Aperghis: 162–3.

<sup>33</sup> Ma 114–15.

<sup>34</sup> Also Schäfer 1995: 54.



in the Seleukid empire and was also, apparently, a normal level in Ptolemaic Egypt.<sup>35</sup>

Demetrios II agreed and, as part of the package, abolished the proportional tax on the products of agriculture: 'from the crops and fruit trees'. He also granted tax relief from tolls and transaction taxes, the salt tax and the crown tax. Here one gets the impression that the status of Jonathan vis-à-vis the Seleukid king had changed. He was to be treated more like a dynast over Judaea, acknowledging Seleukid overlordship in return for a specified annual payment and the provision of certain services (see below).

The Seleukid kings did not relinquish their right to rule over the Jews until after the death of Antiochos VII in 129. They expected payment of tribute and taxes or a lump sum in lieu, even if they were sometimes too weak, when faced with their internal dynastic conflicts, to enforce immediate collection.

The reason given by Tryphon, acting for the infant, Antiochos VI, for detaining Jonathan some years later was that 'he owed money to the royal treasury in connection with the offices he held' (1 Macc. 13: 15), presumably referring to the annual payments that had been agreed upon earlier with Demetrios II. The two offices of interest to the Seleukids were no doubt those of high priest, responsible for paying any taxes owed by the Temple, and tax contractor for all of Judaea.

After he had assassinated Antiochos VI, Tryphon conducted war successfully against both the Jews and Demetrios II. Simon, Jonathan's brother and successor, turned to Demetrios for aid in 142, with an offer of a gold crown and a palm branch, an acknowledgement of his subject status. The Seleukid king, in need of Jewish support, was very forthcoming, granting relief from tribute and cancelling the crown tax and any other tax collected in Jerusalem. This was actually considered by the Jews the sign of their independence, 'the yoke of the Gentiles was removed from Israel' (1 Macc. 36–41). However, this was probably not the view of the Seleukids, who must have regarded the tribute and tax remissions only as a temporary measure, in view of their later attitude. In any case, the citadel of Jerusalem (Akra) still remained under the control of the Seleukid garrison, a clear sign of their intentions, although they were unable to hold it the following year.

When Antiochos VII made his attempt against Tryphon for the Seleukid throne in 140, he confirmed the previous concessions of Demetrios II to the Jews and agreed to write off their debts to the royal treasury in a bid to gain support, with the right to mint coinage as a further incentive (1 Macc. 15: 5–8). These were all promises, of course, never realised, and Antiochos soon turned against Simon, demanding of him that he return the Akra of Jerusalem, as well as Joppa and Gazara, which he had taken outside the borders of Judaea, or else

<sup>35</sup> Aperghis 137–52.

pay him (in tax and tribute) 500 talents for these (annually) plus 500 talents more as damages (1 Macc. 15: 28–31). Simon counter-offered with 100 talents (annually) for Joppa and Gazara (1 Macc. 15: 35), thus signalling that he was prepared to continue with a tributary relationship, but on milder terms. This episode is reported somewhat differently in Josephus, where it is Simon's son and successor, Hyrcanus, who negotiates with Antiochos regarding the tribute of Joppa and other cities bordering on Judaea, while Seleukid overlordship was to be effectively acknowledged not by accepting a Seleukid garrison at Jerusalem, but by pulling down the recently constructed fortifications of the city and providing hostages. Furthermore, Hyrcanus' request to Antiochos was that he should restore to the Jews their native form of government (*AJ* 13.245–7), i.e. that they should be permitted to live under their own laws, an echo of Antiochos III's edict of 200, but certainly not a demand for complete independence.

One aspect of overlordship was the right, reserved by the Seleukid kings, to confirm the Jewish high priest in his position. Jonathan himself went to Ptolemaïs on the command of Demetrios II and received confirmation of the high priesthood, 'as he had from the other kings before' (Joseph *AJ* 13.129) and as he was to do from Antiochos VI, from whom he also received the honours awarded by the king to an important official of the state, a purple garment, a golden brooch and the title of 'First Friend' (1 Macc. 11: 58; Joseph *AJ* 13.146). A break came when Simon was elected high priest directly by the people after Jonathan's death, but the Jews were then at war with both Tryphon and Demetrios II. However, Simon was confirmed later, in 140, as high priest by Demetrios II with the right to wear purple and a gold buckle (1 Macc. 14: 38–45). Since one finds the high priest intimately involved with the payment of tribute and taxes owed to the Seleukid kings, starting with Onias and continuing with Jason, Menelaos, Jonathan, Simon, and Hyrcanus, it is not unreasonable to suppose that the king was not only confirming the high priesthood, but also the right to collect revenue on his behalf as tax contractor.

## EXTRAORDINARY PAYMENTS

Antiochos IV was offered 150 talents by Jason, the high priest, for the privilege of enrolling citizens in Antioch-Jerusalem (2 Macc. 4: 9). There were apparently advantages to being a citizen, fiscal and otherwise, which someone would be willing to pay for.

In any tributary situation, the governing power extracts taxes, rents and services regularly from those governed, but it may, when it feels the need, demand additional contributions from its subjects. The Seleukid Empire was

no exception.<sup>36</sup> The Jewish sources have described occasions in which Seleukid kings apparently resorted to force to get what they wanted from the Jews. But were these really wanton acts of plunder, as reported?

### The Heliodorus episode

The first occasion is the attempt by Heliodorus, the representative of Seleukos IV, apparently to rob the Temple of Jerusalem of the savings of widows and orphans and some deposits of Hyrcanus the Tobiad valued at 200 talents of gold and 400 talents of silver, which was frustrated by divine intervention (2 Macc. 3: 7–40). Clearly the Temple's wealth was not represented by such savings alone, nor would one expect an aggressor to concentrate on these and nothing else. One suspects that the 'widows and children' are colouring to make the deed appear more dastardly. The real anger of the writer seems to be directed more against the Jew, Simon, the Seleukid supervisor (*prostatēs*) of the Temple, who had brought in the central authorities by informing them that the contents of the Temple treasury 'did not match the accounts for the sacrifices' (2 Macc. 3: 6). It was certainly Simon's job to keep an eye on the Temple's funds, not only because the Seleukid kings expected revenue from the Temple in the form of taxation, but also because they themselves made contributions for the performance of the rites (see below). In this particular situation, one cannot decide whether Simon was being truthful and Onias the high priest was indeed lining his pockets, or whether Simon was simply trying to present Onias in a bad light. Certainly the two were rivals, as one knows from their earlier attempts to take on the function of market supervisor (*agoranomos*) in Jerusalem (2 Macc. 3: 5). Heliodorus apparently found reason to believe the Seleukid representative and was quite possibly demanding what he felt was justifiably owed by the Temple authorities.

### The two Egyptian campaigns of Antiochos IV

Only one campaign is noted in 1 Maccabees (1: 17–19), a victorious one, therefore presumably the first. Upon his return from Egypt in 169, Antiochos apparently entered Jerusalem, plundered the Temple and killed some people (1.20–4).

However, 2 Maccabees (4: 32–42) makes no mention of this expedition or the plundering of the Temple, but, in fact, accuses the high priest, Menelaos, and his brother, Lysimachos, of stealing the Temple's gold vessels and, when

<sup>36</sup> Aperghis 171–5.

opposed by their fellow-citizens, causing bloodshed in Jerusalem. No Seleukid involvement at all is noted.

What this source adds, however, is that Menelaos had been unable to keep up with his promised tribute and tax payments to the king, despite the efforts of Sostratos, the garrison commander at Jerusalem, who kept requesting them (2 Macc. 4: 27–8). It will be recalled (see above) that Menelaos' commitment was 300 talents more than his predecessor's, 740 talents in all annually, and that three years had elapsed since he had made this commitment c.172, enough time for a considerable sum to have built up. The 1,800 talents of valuables looted from Jerusalem, referred to in 2 Maccabees in connection with Antiochos' return from his second expedition to Egypt (see below) is a surprisingly exact figure, not one that would normally be expected as a booty assessment. In Greek tradition a fine was often imposed equal in value to the amount owed.<sup>37</sup> If, say, Menelaos had not paid the additional 300 talents a year he had promised for three years, or 900 talents in all, the king could justifiably have demanded an additional 900 talents as a penalty payment giving a total of 1,800 talents.

There seems to be no reason why a victorious Antiochos, flush with booty after his successful first foray into Egypt, should wish to damage his relations with his Jewish subjects by wanton acts of plunder and killing. Instead one may conjecture that the king arrived in Jerusalem simply to demand payment of the monies owed him and then took them from the Temple with the help of Menelaos as he felt entitled to. According to 1 Maccabees, 'some people' were killed in the process, which is hardly an indication of wholesale slaughter. It may, in fact, reflect 2 Maccabees, where the killing took place amongst the Jews, as opponents of Menelaos and Lysimachos tried to prevent the two from removing Temple treasures, presumably in order to pay the king.

In 2 Maccabees, the invasion of Egypt is referred to as Antiochos' second (5: 1) and is that of 168. While this was under way, a rumour circulated in Judaea that the king was dead. This stimulated the former high priest Jason to make an assault upon Jerusalem and commence slaughtering his political opponents (5: 5–6). Since both Jason and the current high priest, Menelaos, belonged to the hellenizing party, one might reasonably see this as a coup by the pro-Ptolemaic faction to oust the pro-Seleukid faction from power. Indeed, when the coup failed, Jason finally sought refuge in Egypt (5: 7–8). According to 2 Maccabees, Antiochos, upon being informed of the troubles in Jerusalem, considered this to mean that Judaea was in revolt. He returned from Egypt and took Jerusalem by storm, killing, enslaving, sacking the Temple and carrying off from it 1,800 talents worth of valuables (5: 11–21). Since the Temple had already been plundered after Antiochos' first expedition, according to

<sup>37</sup> Aperghis 173.

1 Maccabees (see above), the 1,800 talents referred to are probably connected with that expedition and, as one saw earlier, simply represent payments due to the king.<sup>38</sup>

In the Book of Daniel there is clear reference to both Egyptian campaigns and Antiochos' return from these. With regard to the first (11: 28), 'and he will return to his country with much wealth and his heart will be set against the holy covenant and he will perform acts and he will return to his country'. What Antiochos' acts were is not stated, but, given the anger expressed in the previous phrase, it is not improbable that these were hostile acts committed against the Jews, such as those mentioned in 1 Maccabees. With regard to the second expedition (11: 30), where there is mention of Antiochos' upset at the hands of the Romans, 'he will return and he will be incensed against the holy covenant and he will perform acts and he will have dealings with those who have forsaken the holy covenant'. This time Antiochos is angrier with the Jews and, once again, is likely to have committed some hostile acts against them, perhaps the killing and enslaving reported in 2 Maccabees.

Only the version of 2 Maccabees gives a historically plausible reason for an attack on Jerusalem: an initially successful coup by the pro-Ptolemaic faction following a rumour that Antiochos was dead, after he had been presumably defeated in Egypt, which is how his setback at the hands of the Roman, Popilius Laenas, may have been reported. It would not have been unnatural for Antiochos to have considered Jerusalem in revolt and to have taken severe measures against a rebel city.

However, immediately afterwards, according to 2 Maccabees (5: 24), Apollonius was sent to Jerusalem 'to slay all the grown men and to sell the women and boys as slaves'. But how could this have been done twice in rapid succession? So who is one to accept as the culprit, Antiochos or Apollonius?

The answer probably lies in 1 Maccabees (1: 29–32) where, two years after the plundering of the Temple during Antiochos' first expedition, a 'chief collector of tribute' (*archōn phorologias*) was sent to Jerusalem 'with a large force'. He suddenly fell upon the city and sacked and burnt it, killing and taking captives. Now 1 Maccabees was originally written in Hebrew and *archon phorologias* would have been the Greek translation of *sar ham-missim*. However, a slight change to *sar ham-musim* would have rendered 'Chief of the Mysians',<sup>39</sup> which is in fact the designation of the Apollonius sent against Jerusalem in 2 Maccabees. It is hardly likely that 'a large force' would be required to simply collect tribute from a peaceful city. There is in this episode no specific mention of the Temple, presumably because it had already been plundered earlier. So this time it was the city's turn. The two years should not be considered an exact time period, but rather as indicating the

<sup>38</sup> Also Mørkholm 1966: 142–3.

<sup>39</sup> In the Loeb edition of Josephus, note e to 12.248.

second year after the first Egyptian campaign of 170/69, i.e. 168/7, at about the time or just after Antiochos' return in autumn 168. It would seem probable then that the king himself did not pass through Jerusalem, which would have been well off his direct route back to Antioch anyway, but sent Apollonius instead. One notes an Apollonius mentioned by Josephus (*AJ* 12.261, 4) as the governor (meridarch) of Samaria, who later led a Seleukid expedition against Judas Maccabeus (*AJ* 12.287).

One may conclude then that, after his first campaign to Egypt, Antiochos returned via Jerusalem and demanded the tribute owed him by Menelaos, who was forced to pay from the Temple treasures. While returning from Egypt after his second expedition, Antiochos was informed of a revolt in Jerusalem and detached a force under Apollonius to quell it. When Apollonius arrived in Jerusalem, he found things quiet, since Jason's coup had been unsuccessful ultimately, but he followed the king's orders nevertheless and put Jerusalem to the sword as a rebel city, after which he seems to have been appointed to the governorship of Samaria.

These occurrences of supposedly wanton killing, enslavement, and plunder by the Seleukids at the expense of the Jews are presented to us by obviously biased sources, which also disagree amongst themselves. It is a pity that there is no Greek source concerning these matters, but, as one saw, there were other possible explanations, derived solely from the normal political and economic interaction of rulers and ruled, which do not cast such a bad light on the behaviour of the Seleukid kings.

## A MONETARY ECONOMY?

The tribute and taxation demanded by the Seleukid kings from Judaea are often expressed in the sources as a lump sum of silver, to be provided by the high priest acting as tax collector. It is difficult to see how he could have obtained this silver if not through tax contributions in silver from the population. There is no evidence to suggest that he collected commodities as tax, which he then sold himself in order to raise the necessary silver, although this may have occurred to a certain extent. In fact, one does know that each Jew was expected to make a regular annual contribution of half a shekel for the Temple rites.<sup>40</sup> So why not a Seleukid silver tax at the same time, which would have amounted on average to about 4½ shekels per person, on the basis of a tax rate of 1½ talents per thousand inhabitants (see above)? Even when a proportion of the grain or fruit harvest is mentioned as the tax, it was argued

<sup>40</sup> Tcherikover 1959: 155.

earlier that this should probably be interpreted as the equivalent value in silver. Judaea was by no means a highly urbanized region, but it seems quite likely that taxes were mainly collected in silver. No mint for silver coinage has been identified in Judaea in the Seleukid period, but the province could have been served quite adequately with coinage from the main mint of the satrapy, Ake-Ptolemaïs.

This is in keeping with the pattern in other areas of the Seleukid Empire, particularly Mesopotamia, northern Syria and Asia Minor,<sup>41</sup> where the drive to monetarize the economy was supported by (a) the establishment of new urban centres and the strengthening of existing ones so as to create markets for silver-based exchange, (b) the need on the part of the administration to make most of its payments, particularly those for military purposes, in coin, (c) the creation of numerous regional mints that could 'top up' the amount of coinage available locally, when it was insufficient for these payments to be made, and (d) the strengthening of the financial administration under the king's personal supervision.<sup>42</sup>

The currency that the Seleukids mostly minted in the satrapy of Koile Syria and Phoenicia was based on the Ptolemaic standard of 14.2 grams, although not immediately after the conquest, as, presumably, enough Ptolemaic currency still circulated and the Seleukids had no particular wish to replace this, since it served the needs of the local economy quite adequately. This is in keeping with their policy elsewhere in the empire where, from the very beginning, they allowed other Attic standard coins to circulate, while their own coinage represented not more than 10–20 per cent of the total initially and less than 50 per cent well into the second century BC. It is possible, of course, that the Ptolemaic standard continued to be used because of Ptolemaic support for different pretenders to the Seleukid throne or because the region continued to entertain strong commercial ties with Egypt despite its political separation.<sup>43</sup>

As to the impact of Seleukid exactions in silver on the economy of Judaea as a whole, it is likely that the most significant effect was the increase in size and importance of Jerusalem. The Seleukid kings had consciously used urbanisation as a tool in other parts of their empire in order to develop a monetary economy. Their numerous city foundations mostly tended to be in areas with rich agricultural potential where production was intensified so as to feed the urban centres. The silver required by producers in order to pay their taxes could then mostly be earned by selling their surpluses in city markets. The

<sup>41</sup> Aperghis 176–8 for a discussion of the degree of monetarization in the Seleukid Empire. In Mesopotamia there existed a centuries-old tradition of exchange using precious metal, which adapted easily to coinage in the Greek sense, while the Mediterranean coastal regions were influenced by the practices of the many Greek-inhabited or hellenized cities.

<sup>42</sup> This is, in fact, the thesis of Aperghis, supported at length with a variety of arguments.

<sup>43</sup> Aperghis 226–36, 244–5.

higher the taxes, the more intensive the cultivation and the larger the city needed to absorb the surplus production. The evidence from Judaea does show high rates of taxation and the growth of Jerusalem is quite marked by the late Hellenistic and Roman periods.<sup>44</sup>

## SERVICE REQUIREMENTS

In addition to tribute and taxation, certain services were also imposed on subject peoples by Seleukid kings: *corvée* duty, military service, supplying of the army on campaign and billeting of troops, even in peacetime.

For *corvée* duty, there is no evidence from Judaea, but Jewish troops were certainly provided at the request of Demetrios II to help quell a revolt in Antioch (1 Macc. 11: 45; Joseph *AJ* 13.134). Later, Antiochos VII, Demetrios' younger brother, defeated the usurper Tryphon and besieged him in Dora. He apparently proposed an alliance with the high priest Simon and invited him to supply money and provisions (Joseph *AJ* 13.223). But this is probably not how one should read this. A Seleukid king, in a position of strength, was probably demanding his rights from a subject dynast. Simon may not have been so forthcoming and Antiochos accordingly sent a force against him, but unsuccessfully. He tried again, however, in 135/4, after Simon was assassinated and his son, Hyrcanus, had been elected to the high priesthood. This time, Antiochos besieged Jerusalem and forced Hyrcanus to sue for peace on the king's terms, one of which was that Hyrcanus should supply Antiochos' army. In the same light, one may view the troops supplied by Hyrcanus for the Parthian expedition of Antiochos VII in 129 (Joseph *AJ* 13.250) as the obligation of a subject dynast to his overlord, rather than as the act of an independent ally, however it may have been presented in the Jewish sources. Hyrcanus was certainly not in a position then to refuse. It is with the death of Antiochos VII on this expedition (129) and the irrevocable weakening of Seleukid power, which the loss of Mesopotamia entailed, that Jewish independence can truly be said to have been gained. In the dynastic conflicts of the Seleukids that followed, Hyrcanus could sit aside and 'no longer provide aid as a subject or friend' (Joseph *AJ* 13.273), but was free to pursue his own interests and expand his power successfully in the territories surrounding Judaea. Note the term 'subject', which must have been Hyrcanus' formal position until then.

With regard to the billeting of troops (*epistathmeia*), there is no direct evidence for Judaea, but only for a neighbouring area. In the so-called Hefzibah or Skythopolis inscription of the 190s, the governor of the satrapy of Koile

<sup>44</sup> City foundations and the triangular pattern of trade linking rural areas to urban centres and the Seleukid administration are discussed at some length in Aperghis 70–3, 89–99.



Syria and Phoenicia, Ptolemaios, is seen to be petitioning Antiochos III to grant him freedom from billeting of troops (*anepistathmeia*) in villages that he owned.<sup>45</sup> The king's orders on this were conveyed to two *dioikētai*, financial administrators, probably of meridarchies. Skythopolis is located just south of the Sea of Galilee in what was probably the meridarchy of Samaria (see above) and it is possible, though unlikely, that one or more of Ptolemaios' villages may have been located in Judaea. However, what is more important in the inscription is that the governor of the satrapy himself was making the request for *anepistathmeia* from the king, which perhaps shows how prevalent billeting must have been in the region. There is no reason, therefore, to believe that Judaeian villages were not burdened by it. Indeed, there was certainly a Seleukid garrison in the Akra at Jerusalem continuously from 168 to 142/1, even when the Maccabees controlled the city itself, and one should not doubt that requisitions and even perhaps billeting were imposed on Jerusalem at certain times. In the prelude to the Maccabean revolt, the city's garrison is even said to have behaved execrably (1 Macc. 1: 33–40).

### BENEFACCTIONS (*EUERGESIAI*)

In a tributary economy, the flow of goods and services is mostly one way, from the ruled to the rulers. In return, the ruled receive the intangible benefits of peace and security. But this is not enough, and it is important for the rulers to make certain concessions to the sensibilities of their subjects, particularly to those categories of the population that hold local political and economic power. This is something the Seleukids did rather well all over their empire.

Greek and native temples, in particular, were the beneficiaries of many royal gifts (*euergesiai*), partly because of the religious sensitivities of the kings themselves and partly because the temples influenced large sections of the population. Thus temples sometimes received outright grants of land or revenue from land or tax exemptions or financial and material assistance with maintenance and construction or goods and subsidies for the performance of cult.<sup>46</sup>

The Temple of Jerusalem was no exception. The support provided for its repair by Antiochos III and the exemptions from head taxes granted to priests, scribes, and temple singers have already been noted. But Antiochos also provided a number of sacrificial animals and a substantial quantity of wine, oil, and frankincense for the rites, to the value of 20,000 shekels of silver (nearly

<sup>45</sup> Landau 1966; Fischer 1979; Bertrand 1982. Aperghis also translates and discusses the inscription (269–73, 318–20).

<sup>46</sup> Aperghis 207–9.

7 talents), and large quantities of flour, wheat and salt in addition (Joseph *AJ* 12.138–44). His successor, Seleukos IV also supported the Temple, ‘covering from his personal funds all the expenses that were necessary for the conducting of the sacrifices’ (2 Macc. 3: 3).

The Seleukid attitude towards native sanctuaries, whether in Babylonia or Asia Minor or Syria, was generally a benevolent one, although it is true that at times of financial strain, particularly after the Roman indemnity imposed at Magnesia (190), temple treasuries sometimes became unwilling targets.<sup>47</sup> There certainly appears to have been a break in the treatment of the Temple of Jerusalem under Antiochos IV, but better relations seem to have resumed later when Demetrios I promised 150,000 drachms for the sacrifices (25 talents) and exemption from the 10,000 drachm tax he collected annually (Joseph *AJ* 13.55).

## THE JEWISH DIASPORA IN THE SELEUKID EMPIRE

The relatively dense population of Judaea in the Seleukid period, about 100 persons per sq. km by my estimate, created pressure which the continuing Diaspora and the Hasmonean expansion may be seen as partially relieving.<sup>48</sup>

Within the Seleukid empire, Jews were present in all the areas surrounding Judaea, as stated earlier. They are also said to have been established by Seleukos I (311–281) in the cities he founded—presumably mainly those in northern Syria—with equal privileges to the Greeks there (Joseph *AJ* 12.119), while Antiochos II (261–246) apparently granted citizenship to Jews in Ionia (Joseph *AJ* 12.125). This should not be taken literally, but a separate self-administering community or *politeuma* of Jews within the cities cannot be excluded, just as Greek *politeumata* had been established in Babylon and, under the high priest Jason, in Jerusalem itself.<sup>49</sup>

Jews also served in the Seleukid army at the time of Antiochos III (223–187), as one knows from his orders relating to the transfer of 2,000 Jewish soldiers and their families from Babylonia to garrisons in Lydia and Phrygia to be settled there with land (Joseph *AJ* 12.149). According to the Jewish tradition, Jewish soldiers in significant numbers fought for Antiochos I (281–261) in Asia Minor against the Galatians (2 Macc. 8: 20). There is also the case of the Jewish captives to be liberated by Demetrios I from wherever they happened to be in his empire, who we must assume had been enslaved when

<sup>47</sup> Aperghis 107–11, 174.

<sup>48</sup> There are many works specifically on the Jewish Diaspora in the Hellenistic period, e.g. Barclay 1996, Gruen 2002, and Hegermann 1989.

<sup>49</sup> Aperghis forthcoming; Spek 2001: 446–56; also preliminary publication by Spek of cuneiform tablets BM 46120 (= 81-7-6,572) and BM 33870 (= Rm IV 432) as BCEHP 13 and 14 in [www.livius.org](http://www.livius.org).

Jerusalem was plundered in 168 or during the Maccabean revolt (1 Macc. 10: 34). But there is also the expressed desire of Demetrios I to enrol 30,000 Jews in his army for garrison duty (1 Macc. 10: 36–7), an offer repeated by Demetrios II (1 Macc. 13: 40), although the number is clearly exaggerated. Indeed the offer specified that pay for Jewish soldiers would be at exactly the same rate as for the other troops of the king.

There is no evidence to show that, in economic matters, these ‘expatriate’ Jews were treated any differently from other subjects of the Seleukid kings.

## CONCLUSIONS

The analysis of tribute, taxation, and services in Judaea during the period of Seleukid rule has come up with a wide variety of exactions by Seleukid kings on their Jewish subjects, all of which can be paralleled in other regions of the empire in the third and second centuries BC.<sup>50</sup>

It is perhaps no coincidence that the financial exactions, in particular, match the different types of revenue of the ‘satrapal economy’ in ps.-Aristotle’s *Oikonomika*: (a) from land, both in the form of a fixed tribute and different proportional taxes on agricultural produce; (b) from natural resources owned by the king (wood and salt in the case of Judaea); (c) from tolls, sales, and other transaction taxes, including the dues for holding a commercial fair; (d) from taxes on animals; (e) from head taxes of various kinds. I have argued, in fact, that the *Oikonomika* should probably be dated to c.275 and describe the conditions of the Seleukid Empire at the time for the benefit of would-be administrators of satrapies and cities.<sup>51</sup>

But, at the same time, the Seleukids provided a variety of economic benefits to the Jews in return, such as increases in territory and revenue, tribute and tax concessions and monetary and material support for the Temple and its cult activities.

The economic interaction between the Seleukid kings and their Jewish subjects seems to have been expressed mainly in coin, which suggests that the economy of Judaea had become considerably monetarized.

Finally, the form and level of exactions and benefits at any given time was very much dependent on the current political situation. Strong kings made fewer concessions and weak kings more, particularly when they were competing with their dynastic rivals for Jewish military support.

<sup>50</sup> Aperghis: 137–66.

<sup>51</sup> Aperghis: 117–35.

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## Mobility and Innovation in Hellenistic Economies: The Causes and Consequences of Human Traffic

ZOSIA H. ARCHIBALD

### ANALYSING MOBILITY AND INNOVATION

The influx of Ashkenazim . . . created . . . two sorts of Jews . . . And just as in the host culture's addiction to the business of domesticity may be seen the particular color of its identity, so it is the reassuring mundaneness of Jewish life in Amsterdam—those prints of house cleaning before Passover, of burying the dead and teaching the young—that describe the synthesis of a Dutch Jewish world culture. (Schama 1987: 595)

Simon Schama's exploration of the shape, colour, and texture of the seventeenth-century Golden Age in the Netherlands provides a convenient if unconventional starting point for considering mobility and innovation in Hellenistic economies. We are presented with a well-known example of mobility, that of the Jewish population of Amsterdam, whose overseas networks constituted one of the group's most significant commercial assets. Some of the difficulties of understanding the dynamic processes that lie behind Schama's sketch are quickly apparent. There is no visible means of distinguishing between temporary residents and longer term ones. Nor is the principle of mobility *per se* what the historian is preoccupied with here, but rather with the effects of mobility on the community as a whole. Those who were in the vanguard of this influx—bankers, merchants, scholars—were nevertheless accompanied by, or associated with, family members, friends, or hangers-on, whose interests and motives were not necessarily identical. It is a particularly vivid example of the kinds of social responses that mobility can provoke and of the personal adjustments and innovations that a new environment can stimulate, not just in those who travel, but also among those most intimately acquainted with travellers.

These valuable insights will acquire significance once the relationship between mobility and innovation has been analysed at a more abstract level. It is my contention that mobility and innovation were connected, albeit indirectly, in the Hellenistic world, and that comparative examples of innovation from other periods and places can enhance our understanding of how this may have occurred.

This may seem a bold claim, linking, as it does, two abstract terms that are already intrinsically complex—mobility and innovation—with analogies from other disciplines. The difficulty of finding an appropriate analytical framework for investigating these complex terms is my chief justification for exploring a new approach. Mobility and innovation are not automatically associated. The mere fact of changing locations does not necessarily bring with it a changed perspective, or a new understanding. Some people move against their will, and this must certainly have been the case for at least some of those inhabitants relocated under the Successors of Alexander the Great. The *synoikismos* of the people of Teos and Lebedos c.303 BC, under Antigonos I;<sup>1</sup> the foundations of Seleukid Antioch or Seleukeia (Str. 16.24.7–10); or the emperor Augustus' creation of Nikopolis (Paus. 5.23.3), are among the best known examples. The connection between innovation and mobility comes about when knowledge is applied in a new context, which changes the existing socio-economic configuration. What follows is an attempt to sketch how innovative practices may have operated in the final centuries BC in the eastern Mediterranean area. It is, therefore, a 'think-piece' rather than a fully articulated exposition, intended to clarify relevant processes and to model some of the constituents on the basis of which a more systematic study can emerge.

Innovation has acquired a rather specific meaning in contemporary usage, partly because of the enormous commercial potential of genuinely innovative practices.<sup>2</sup> The word has become enveloped in a quasi-magical lore, despite the regular emergence of original ideas from unlikely sources. In the context of Antiquity, innovation has usually been conceived in terms of changes in agricultural techniques, including the use of mills and presses, or of technological and scientific developments (see now Schneider 2007).

However, the term can usefully be applied more widely, for empirical evidence, in the form of technological practice, suggests that modern scholarly perceptions of ancient innovation have failed to appreciate significant areas of

<sup>1</sup> *Syll.*<sup>3</sup> 344 = Bagnall and Derow 2004: 11–15, no.7 and Austin<sup>2</sup> no. 48 with further refs; see the contributions to Sordi 1995, esp. Landucci Gattinioni 1995. See in general Cohen 1995: 188–91 (Lebedos and Teos).

<sup>2</sup> A preliminary application of some contemporary concepts of innovation to antiquity has been sketched in Archibald (forthcoming, 2011). I am grateful to Ian Archibald, John Davies, Graham Oliver, Vincent Gabrielsen, and to participants of the Copenhagen Conference, 'Commodity Flows and Demand Creation', for their helpful comments and suggestions.

technological and non-technological applications of new ideas. Experimentation was both more widespread and more advanced than the analysis of technical treatises would suggest. This is one of a range of arguments deployed in the most recent study to focus on ancient technology, which seeks to re-evaluate technical expertise in Antiquity (Cuomo 2007). Ancient texts that discuss craftsmanship and expertise, particularly Plato's dialogues, have often formed a starting point for discussions of technology. Yet there was an inherent tension between other kinds of technical expertise discussed by philosophers and their own self-valuation. Cuomo argues that attempts by philosophers to present themselves, through their teaching and writings, as the pre-eminent experts in knowledge, involved denigrating other kinds of expertise. We should not expect their views to represent anything other than those of one interest group, however articulate.<sup>3</sup>

A more imaginative understanding of technology and of technological innovation needs to inform the way in which we consider some of the more unusual examples of technological leaps forward, as well as more mundane developments. Technical innovations do not arise in a vacuum. The Antikythera mechanism, close study of which has shown that it cannot have been a unique device, is an exceptional and spectacular object, which incorporates a variety of different technical and engineering processes, and has not yet been fully understood (Freeth et al. 2006; Freeth et al. 2008). But the artefact's uniqueness stems from the paucity of comparable evidence. The material world, then as now, provided those individuals with a natural interest in how things work with a magnificent laboratory. In a world where there was no recognized body of knowledge on which the adventurous and the ambitious could draw, the fruits of experimental knowledge had a value beyond anything that could be learned from books, even if libraries were accumulating what could be known.<sup>4</sup> Cuomo's appreciation of the deep (if socially and spatially limited) interest in technology during Antiquity is congruent with the ways in which archaeologists are studying the transmission of technical knowledge (see below).

For social and economic historians, as Schama illustrates so engagingly in the case of early modern Amsterdam, the agents of change can be individuals or groups, from any and every social and cultural background. Change, whether we apprehend it through social trends, gentrification, new products, economic growth, or technological development, does not result from directives, although the rules (legal, political, social, logistical, and other) that

<sup>3</sup> I summarize here the argument of Cuomo 2007: 22–40; cf. also Raepsaet 1994: 326; Horden and Purcell 291, 296–7; Feyel 7–11, 319–30, 369–90, 524–7, for detailed discussion of epigraphic evidence from sanctuaries at Athens, Delphi, Delos, Eleusis, and Epidauros, as well as the understanding of *technē*.

<sup>4</sup> See the contributions in MacLeod 2000.

encourage or discourage movement do certainly affect the volume and pace of human traffic. Change simply happens, and some of it, perhaps much of it, is a function of human interaction involving distances. One further preliminary point is both terminological and historical. I have used the terms migration and mobility interchangeably, even though they are not equivalent. For practical purposes, we cannot readily distinguish between these two kinds of movement in antiquity, and in some ways it is preferable not to do so (see McCormick 2001: 15–23).

Cultural innovation in the Hellenistic world has rightly been linked to the conscious creation of new political units in the eastern Mediterranean, including the Seleukid Empire, the Attalid kingdom, Lysimachos' realm in Thrace, and the Bosporan state of the Spartokid dynasty, as well as the fusion of cultures in Ptolemaic Egypt. Similar developments were also taking place in the western Mediterranean, and were undoubtedly part of a set of interlinked phenomena, although scholars tend to study them separately, largely for practical or pragmatic, rather than conceptual reasons.<sup>5</sup> These cultural constructs fused a new ruling élite, new political and cultural institutions, new life styles, fashions, and aspirations, onto societies that had been organised in other ways, and thereby acted as the drivers of new economic patterns of demand and supply. Some of these drivers emanated from the political centres of power; others developed as intended or unintended consequences of the new political environments. The simple fact that the new regimes all stemmed from a single social group, namely Alexander the Great's lieutenants or their rivals, makes these new states quite an unusual set of political entities, since, from the start, they shared many of the same social networks (notwithstanding the intensely competitive character within them). Social networks were thereby spread for the first time across the whole of the eastern Mediterranean and large parts of the Near East.

Whilst the material manifestations of the new regimes can be identified with comparative ease, it is more difficult to evaluate how such ambitious bids to capture new territories were sustained. Grand narratives of the period still often follow the political discourse, which saw the deployment of Macedonian soldiers and Greek mercenaries to the new kingdoms, where, as privileged settlers, they diffused the culture and institutions of their homelands—even though John Davies argued a quarter of a century ago that flows of manpower were much more complex than such a scheme suggests. Immigrants were not restricted to Greeks and Macedonians; and the movement of individuals, if not groups, operated reciprocally, with Syrians, Phoenicians, Egyptians, Rhodians, and various inhabitants of Asia Minor (notably east Greeks), moving west into

<sup>5</sup> Prag 2007 provides an extensive bibliography on Sicily, which marries island and Italian affairs; see esp. 69 nn. 5, 7.



the Aegean, whether on a temporary or longer-term basis.<sup>6</sup> The evidence is not easy to collect, because it is qualitatively heterogeneous; it includes funerary monuments and inscriptions, as well as archaeological traces of non-indigenous cult behaviour and exotic cultural products. Greek and Macedonian institutions were grafted onto new stock in distant places. Within the newly acquired territories, the adaptability of new settlers and their willingness to develop new approaches and new lifestyles is equally significant. Although it is undoubtedly true that Greek, Macedonian, and other immigrants introduced many aspects of Aegean life into the kingdoms of the Successors, the immigrants were not simply reproducing a home from home. What is most striking about the material world of the Hellenistic age is how much of it was entirely new.

## MOVEMENTS OF MILITARY MANPOWER

Mobility in the Hellenistic age is understood first and foremost as the movement of people to new territories. The most significant mobile component that can be identified in ancient sources remains the movement of mercenary soldiers, principally from Europe to Asia and north Africa, but also between different parts of the Near East. The driver for this traffic is not hard to find. As Marcel Launey stated more than half a century ago, 'les besoins en hommes des États hellénistiques sont permanents et, à l'échelle antique, considerable' (Launey [1949] 1987: 7).

Launey's two-volume study of military manpower in the Hellenistic kingdoms, whilst in need of updating in its evidence base, is still the most detailed analysis of troop movements that we have at our disposal. The power of the Successors had constantly to be shored up with armies of competitive strength.<sup>7</sup> The division of Alexander's territorial acquisitions meant the multiplication of men and resources in order to maintain rival rulers in power. Their relentless hunger for manpower was as insistent as the twentieth century's thirst for petroleum. In his recent handbook on *War in the*

<sup>6</sup> Reciprocal movements were outlined by Davies (1984: 264–9). Since then the evidence base has been expanded in various ways, which cannot be fully examined here (see e.g. Osborne and Byrne 1996; Le Dinahet-Couilloud 1997; Tataki 1998; Mari 2002; La'Da 2002 *passim*; Bingen 2007; Archibald 2007).

<sup>7</sup> Baker 2005: 387–90 with refs. Walter Scheidel has postulated attrition rates as high as 60 per cent among certain active combat units of the Roman army, including the Praetorian Guard, with an average combat mortality rate of 8.8 per cent for troops on active service (Scheidel 2007). All we can realistically assume is that troops on active service suffered rates of attrition, due to infectious diseases as well as battle losses, in excess of 8 per cent per annum, which could rise dramatically following unprecedented changes of strategy, weather, and local ecologies.

*Hellenistic World*, Angelos Chaniotis has recapitulated the magnitude and ubiquity of war (particularly of low level attrition) and of military personnel (Chaniotis 2005: 1–17). Not least among the powers to join in this arms race was the Roman state, whose enhanced capacity, both before and especially after the Second Punic War, ratcheted up the scale of combat forces (see esp. Prag 2007). Nevertheless, we are no closer to estimating indicative, let alone absolute, figures by this method. At most we may be able to observe trends within the pattern of recruitment that can provide proxy data.

Launey's extensive and generously referenced discussions, arranged by region and city of origin, are punctuated with close analysis of battle figures (Launey [1949] 1987: 94–103). The same figures have formed the basis of most subsequent discussions of Hellenistic manpower.<sup>8</sup> Even in 317 BC, the Macedonian component of Antiochos I's army was little more than one-fifth of the total (Diod. 19.27–28; Launey [1949] 1987: 96). By the time of Raphia in 217 BC, Antiochos III was able to field the astonishing number of 62,000 infantrymen, not counting other troops.<sup>9</sup> Although the gross numbers of field troops appear to have almost doubled, the relative proportions of men from different regions remained comparable. The Ptolemaic forces at Raphia were on a similar scale, between 55,000 and 75,000 infantrymen.<sup>10</sup> The data for the Macedonian armies of Antigonos Doson at Sellasia (18,600 excluding allies: Plb. 2.65); of Philip V at Kynoskephalai (25,500: Livy 33.4) and Perseus in 171 BC, prior to Pydna (43,000: Livy 42.51), show that the rulers of the Old Kingdom were much more dependent on troops from various parts of the Balkans, whereas the range available to Seleukid and Ptolemaic rulers was consistently very wide indeed, even if successive battle lines suggest that each dynasty had developed what might be termed 'niche' strategies. The Ptolemies developed a pattern of recruitment from Asia Minor, central Greece, and the islands, consistent with their overseas political policies (Préaux 1978: 314). It is generally accepted that the Ptolemies and the Seleukids actively encouraged would-be recruits with offers of land allotments, which provided successful settlers with property that could in practice become a grant in perpetuity. This aspect of Hellenistic migration has been investigated in some considerable detail.<sup>11</sup> But it has proved easier to reconstruct the institutional mechanisms of settlement than to evaluate the movement and behaviour of settlers.

<sup>8</sup> Préaux 1978: 312–19; Billows 261, 353–60, App. 2; Aperghis 190–20.

<sup>9</sup> Plb. 5.79.3–13, 82; App. Syr. 32; cf. 70,000 infantry and 10,000 cavalrymen raised by Antigonos and Demetrios at Ipsos: Plut. *Dem.* 28.3.

<sup>10</sup> Plb. 5.65: for 219 BC; Launey [1949] 1987: 96–103; Clarysse and Thompson 1. 153, propose that at least half of the cavalry troops levied for the Fourth Syrian War (219–217 BC) could have been raised from the Arsinoite *nome* alone, in view of the presence on contemporary tax registers of more than 1,000 cavalry klerouchs (= settlers) and more than 400 serving cavalry.

<sup>11</sup> Ptolemaic: Préaux 400–3, 463–77; Uebel 1968; Van t'Dack 1977; Clarysse and Thompson 1. 148–54. Seleukid: Cohen 1978, 1995; Billows 1995; Chaniotis 2005: 82–88.

Moreover, Aperghis, accepting Cohen's conviction that military plots did not necessarily entail active service (Cohen 1995: 63), has recently argued that colonists were of more value to the Seleukids as wealth generators on the land than they were as army recruits (Aperghis 194; cf. esp. Aperghis 2005).

In addition to field armies, the Successors needed garrison troops, who would provide the means to deal with local defence.<sup>12</sup> As in the case of military settlers, so in that of garrison troops; we lack sensible criteria on which to evaluate numbers, because we do not know how to allow for 'wastage' as well as for logistical needs. So the challenge of estimating the scale of recruitment has in practice been deferred. Familiarity with the effects of Hellenistic warfare makes the effort of estimating mobility even more problematic, since movement was not necessarily the result of rational and willed planning, but could result from kidnapping, piracy, or enforced displacement (Chaniotis 2005: 245–51). Many of the alleged fifty thousand Greek mercenaries in Asia at the time of Alexander III's expedition (Curt. 5.11.55; Paus. 8.52.5),<sup>13</sup> may well have found their way back to Asia after Alexander's death, resuming connections cemented over a number of years. They did not belong to the narrative of the Successors, so are effectively invisible in the source record.

But there are alternative ways of thinking about the evidence. Launey attempted to sketch trends within the pattern of recruitment to military colonies, using papyri from the Arsinoite *nome* as his principal evidence base. He noted the enormous range of places of origin, but remarked that relative proportions of recruits were different, and developed along different trajectories over time. The largest share during the third century BC was made up of Macedonians, with Balkan settlers, particularly Thracians, not far behind (Bingen 2007). Greek settlers were broken down according to Peloponnesians, mainland Greeks, and Islanders, but Aegean Greeks as a group came in numbers comparable to Macedonians. Other important groups were represented by settlers from Cyrenaica, from various parts of Asia Minor, Iranians, and Levantines (Launey [1949] 1987: 89–99).<sup>14</sup> The increase of Iranian and

<sup>12</sup> G.T. Griffith therefore estimated that the total strength of Antigonos Monophthalmos' forces would have been in the order of 100,000 men, including garrison troops (Griffith 1935: 51). Billows would prefer a figure of 100,000 regular infantrymen, plus another 10,000 cavalry, excluding a garrison force of c.30,000 (Billows 354). Aperghis accepts a core of 20,000–30,000 men for garrison duties, supplemented by regulars from the army during more settled periods (Aperghis 200). These figures have always been intended to indicate orders of magnitude, not actual numbers. These are also the numbers that have been used to calculate military expenditure (thus Milns 1987: 254–6, calculated a gross sum of 6,000T pa, for 100,000 mercenaries, on an average daily wage of 1dr.; followed by Le Rider and de Callatay 2006: 174 and n. 3, who put the gross sum at 8,000T, to include 2,000T for a fleet of 80–90 ships).

<sup>13</sup> Gattinoni 1995: 130 and n. 36. with further discussion.

<sup>14</sup> Préaux 1978: 313–15, commenting on the skewed nature of the data sets in geographical terms; La'Da 2002 for the full range of ethnic affiliations represented in Egypt. For census data see now Clarysse and Thompson 1. 2–9, 92–113. .

Levantine settlers in this period is not in doubt, even if hard to calibrate against Greeks or Macedonians. Moreover, military settlers registered for tax purposes as Greek were not necessarily ethnically Greek. Under the Ptolemies, the Jews enjoyed the same social and legal status as other immigrant colonists, and there is every reason to believe that the Jewish population of Egypt increased throughout the Ptolemaic period, both in Alexandria and in rural areas.<sup>15</sup> The third-century BC salt tax returns in the Arsinoite *nome* of the Fayum project the military component as 15.5 per cent of a total population of 85,000–95,000.<sup>16</sup> This is one of the most precise estimates attempted to date. Chattel slavery seems to have been parasitic to the new immigrant population, but only one in seven households evidently owned slaves.<sup>17</sup> The overall proportion of the Hellenic sector, military and civilian, constituted 32.2 per cent in the Arsinoite *nome*.<sup>18</sup> This was one of the most intensively colonised areas of the Fayum. The multi-ethnic immigrants of the Fayum were a minority within a much larger Egyptian population, even if the size of this minority was quite a visible one in certain areas.

The status enjoyed by military colonists was undoubtedly a significant incentive. But such advantages do not encourage mass emigration. Here we may recall the realities of the migrant's world as Simon Schama depicts it—the social divisions even within self-styled groups; the quotidian boredom alongside occasional splendours; and the long-term anxieties of migrants and natives about loyalty and trust. Although the Jews of Amsterdam were socially subordinated, while the immigrant Greeks and Macedonians in the kingdoms of the Successors formed a socially dominant élite, in terms of commercial connections, the diamond merchants in particular were well connected to Italian dealers in Lisbon and Indians in Goa.<sup>19</sup> Personal networks deserve more attention in estimating the relative influence exerted by individuals—a matter to which I will return below. Such evidence as we have about armies and their detachments shows a strange patchwork of soldiers from many different places of origin. The force sent to Lilaia in Phokis during the First Macedonian War, c.208 BC, included men from the Peloponnesian states of Sikyon, Sparta, Arkadia, and Achaia, the mainland communities of Eretria, Lokris, Phokis, Aitolia, and Thessaly, as well as the islands of Kalymnos and Crete, the northerly states of Macedon and Thrace, a number of regions in Asia Minor, together with the more distant Sicily and Massalia.<sup>20</sup>

The extraordinarily varied make-up of Hellenistic armies tells us something important. If it had been possible to recruit easily, the Successors would surely

<sup>15</sup> Méléze Modrzejewski 1995: 47–157; Clarysse and Thompson 1. 147–8.

<sup>16</sup> Clarysse and Thompson 1. 92–5.

<sup>17</sup> Ibid. 262–7, esp. 265.

<sup>18</sup> Ibid. 156.

<sup>19</sup> Trivellato 2003.

<sup>20</sup> Launey [1949]1987: 654–5; Chaniotis 2002; 2005: 250.

have relied on a more homogeneous range of recruiting grounds. But two lessons learned from contemporary patterns of migration are relevant here. One is the factor of relative incentives. The other is the importance of networks. Travel for the purpose of employment is not, even today, a goal for mass populations. It is attractive to certain groups only. The intrinsic difficulties of making the transition from home to abroad, cultural and social, as well as logistical, discourage the majority unless there are known advantages, including a social network that can provide support for newcomers, or unless conditions at home make a living difficult. So migration results from a combination of 'pushes' and 'pulls', that is, local conditions and external incentives. A quarter of a century ago, studies of nineteenth-century migration from Europe to North America showed that exceptional waves of immigration coincided with upswings in the rate of economic growth in the United States. The timing of these waves was partly dependent on birth cycles in Europe, but also on the emergence of significant innovations (Thomas 1973: 123–74). The peaks of immigration also coincided with sharp increases in wages in North America, at a time when there was no comparable growth in income in the home countries (Thomas 1973: 83–122). Contemporary studies of migration focus on the changing proportions of free and slave immigrants, particularly in the seventeenth and eighteenth centuries, when tens of thousands, later hundreds of thousands of migrants travelled westwards, to a variety of destinations.<sup>21</sup> In the case of the Hellenistic world, there were real potential incentives for mainland Greeks to go east, but these were tempered by logistical and employment considerations.<sup>22</sup>

What is striking about the pattern of military and colonial settlement in the Hellenistic east is that it reflects a profile similar to migration patterns in other periods and places.<sup>23</sup> Contemporary migration studies reveal that countries with large populations are also those with the largest net output of migrants. However, some smaller countries export a far larger share of their populations than others. In some cases this may be as high as 50 or even 80 per cent. The origins of Hellenistic mercenaries reveal that men were recruited from large territorial communities, with comparatively large populations, and well-established traditions of professional warfare, such as Athens, Boiotia, Thessaly, Aitolia, and Macedonia, as well as small states, such as the coastal communities of Lykia and

<sup>21</sup> See esp. Horn and Morgan 2005: 24 and Table 2.1, with statistical data; Eltis 2005: 110–12 and Fig. 6.1.

<sup>22</sup> Lewis 1986: 8–36; Clarysse and Thompson 1.10–36, 246–317 on household sizes in the Fayum, where Greek families were much more likely than Egyptian ones to have non-kin dependents: 163 Greek families had 93 dependants, as against 256 Egyptian families with a mere 6. Immigrant Greek families were wealthier, had more land, and larger family units (although the male:female ratio could vary considerably: *ibid.* 249–54, 295–304.

<sup>23</sup> See Cohen 1978; *id.* 1995: 16–23; 42–9; 58–65; 212–13 (Jewish colonies in Lydia and Phrygia under Antiochos III); and the sections on Phrygia (pp. 277–326) and Lydia (pp. 195–242).

Pamphylia, or medium-sized units, such as the cities of Euboea. In other words, although the Successor kings made strenuous efforts to recruit widely, the results depended on drivers that were only partly under their control, if at all; factors were in play that were equally valid for other periods—fluctuating birth rates; the relative prosperity of specific recruiting regions; as well as, to a greater or lesser extent, and depending on wider events, political decisions. Thus Antigonos Monophthalmos' general Aristodemos succeeded in recruiting 8,000 Peloponnesian mercenaries with Spartan approval (Diod. 19.60); while the Seleukids were prohibited from recruiting in areas of Roman influence after Apameia (Polyb. 21.43).

The Successors could and did introduce non-Macedonians into Macedonian regiments and trained them to fight as phalangites, adopting the traditions as well as the status of ethnic Macedonians, just as recruits to modern regiments adopt the associated heritage and history.<sup>24</sup> Mercenaries represented a very different prospect from regular soldiers. They might serve for limited periods, and would be encouraged by working conditions that would make them feel more at home. This is perhaps why the places of origin of garrison soldiers are made explicit on inscriptions connected with their term of duty (Chaniotis 2005: 250–1). Their own traditions and connections were a source of pride and shared experience. Specific social and historical connections are likely to have provided the preferred route of recruitment for such troops. In 169/8 BC, the historian Polybios accompanied his father Lykortas, who was leading 1,000 Achaian infantrymen to Egypt, in support of Ptolemy VI and his brother Ptolemy VII's campaign against the Seleukid king Antiochos IV (Plb. 29.23.7). Polybios was to command the 200 cavalrymen who were also recruited. As Frank Walbank has emphasized, 'This shows that over the years a close family link had been established between Lykortas and the Ptolemaic court.' (Walbank 2002a: 56) The Achaian contingent illustrates what John Davies termed a 'closed loop' relationship; but in other instances, service in a garrison or fort could easily have resulted in a commission elsewhere, resulting in the 'capillary' effect (Davies 2001: 38).

#### CONTEMPORARY PATTERNS OF MOBILITY: COMPARATIVE ISSUES

At the most abstract level, human mobility has significant impact, not just on the economy of the recipient destination, but also on that of the country of origin, where adjustments must be made to cover the loss of a contributing

<sup>24</sup> Diod. 19.27.6: 317 BC; cf. 29. 3; Launey [1949]1987: 360–5; Aperghis 196.

individual (see e.g. Pooley and Turnbull 1998: 304). This may lead to efficiencies and greater productivity on the part of those left behind. In their introduction to the first of a series of investigations carried out on behalf of the World Bank, Çağlar Özden and Maurice Schiff argue, on the basis of current data, that if the OECD countries increased the proportion of immigrants in their labour markets by as little as 3 per cent, then the overall benefits that would accrue could exceed those that might be generated as a result of global trade liberalization (Özden and Schiff 2006: 6–7). Since these statistics were published, a global economic downturn has focused attention on the negative consequences of mobility and immigration for host societies, which makes it more difficult to consider such issues dispassionately. The authors of the research assume that the majority of migrants in this scenario would be from less skilled groups, rather than trained specialists, and that those deriving benefits would include the migrants themselves; the consumers of recipient countries; what the authors call the ‘complementary factors of production’, namely the employers and investors, the labour and capital resources of the host country; and the families and friends of migrants in their country of origin, who receive money remittances from those abroad.

The kinds of research represented by these recent studies for the World Bank flag the plethora of issues that mobility in any age involves: education, social and economic aspirations, skills, knowledge of international affairs, the policies of recipient nations keen to enhance labour shortages, investment in human capital, wage differentials. Rates of migration are enmeshed not just in factors connected with working conditions, political relations, and opportunities in the countries of origin. They also depend on access to markets abroad, transportation and adjustment costs, and the existence of familiar networks in host countries (Burnley 2005; Özden and Schiff 2006: 4–18; Docquier and Marfouk 2006). Many of these factors have not been explored in any systematic way in the context of antiquity. Some of them may well be unanswerable. What these analogies do provide, however, are indications of the kinds of factors that should be accounted for in studies of ancient mobility; which may be significant drivers of travel.

Bearing in mind the difficulties that contemporary societies experience in coming to terms with and understanding the phenomenon of mobility, it may be useful to clarify the kinds of insights that research from recent contexts can provide for students of more remote times. Migration has risen dramatically on a global scale, and there has been a consequent expansion of research, with dedicated journals.<sup>25</sup> The reasons why particular groups of people move are often highly contingent; they may be connected to specific job opportunities,

<sup>25</sup> e.g. *Immigrants and Minorities* (Taylor and Francis); *Migrations and Identities. A journal about people and ideas in motion* (Liverpool University Press); *International Migration Review* (Center for Migration Studies, New York: Wiley); *Outre-Mers. Revue d'Histoire, L'Afrique des Indiens* (Société française d'Histoires d'Outre Mer, Paris) ; *Estudios Migratorios Latinoamericanos*.

perhaps to unique circumstances (see e.g. Korobkov 2007). Comparative data can provide patterns of behaviour that may illuminate partial or incomplete patterns in the past. We can certainly gain a richer, more nuanced understanding of the interconnections between migrants and host communities, migrants and those they leave behind, and the consequences of short- or long-term travel.

It must be admitted that there are potential problems in using comparative data to infer patterns from the past. Mobility is, by definition, hard to capture. Contemporary bureaucratic bodies collect data in various ways, primarily from census returns, with the aim of assessing those kinds of movements that governments want to know about, whether for fiscal, security, or legal purposes—cross border traffic; financial transactions; employment data. Such motives form the basis of much research about employee mobility (cf. Burnley 2005; Lin and Christiadi 2006; Kambourov and Manovskii 2008). The primary data on which such analyses are carried out provides a very limited snapshot of social dynamics. If we leave aside issues of intercontinental migration, which forms the most visible and politically charged element in contemporary societies, mobility is highest among young men, who move in connection with changes of occupation. Women are more geographically constrained than men, and most of those that move, of either gender, do not travel far from their place of origin. But this has not always been the case. The enforced movement of women, particularly those who were enslaved, is still an under-explored topic.<sup>26</sup> For historians who have grown up in industrialized urban contexts, the notion of ancient mobility is rather alien. Modern preoccupations with the value of real estate, property investment, and inheritance, may have encouraged historians to value evidence of territorial continuity at the expense of other phenomena, including mobility, whether temporary or permanent. Historians of the early modern era refer to mobility as a norm, be it internal or overseas.<sup>27</sup>

## A CASE STUDY: THE MOVEMENT OF ARTISANS

Christophe Feysel's recent analysis of selected epigraphic evidence for the employment of craftsmen in Greek sanctuaries provides one of the most detailed resources for the movement of named individuals. The corpus of inscriptions from Delos covering the period of the island's independence from Athens (314–166 BC) is the most significant single body of data included in his survey. The annual accounts published on behalf of the magistrates, the

<sup>26</sup> Lin and Christiadi 2006; Kambourov and Manovskii 2008; on the migration of enslaved women: Horden and Purcell 388–91.

<sup>27</sup> Games 2009, 33.



*hieropoioi*, responsible for the administration of the sanctuary of Apollo, have produced 652 wholly or partially named craftsmen, out of a gross total of 721 identifiable employees (Feyel 22–6; Catal. pp. 189–316). Most of those named cannot be directly associated with a known provenience, although the rich epigraphic record from the island makes it possible to refer a significant number of entries in the catalogue to Delian citizens known from other inscriptions. Names that are connected with a specific origin may not be numerous in statistical terms, but nevertheless provide a very revealing data set. Many of them were citizens of other communities in the Cyclades, or islands and peninsulas little further away: Naxos (Dél 8, 180); Paros (Dél 125, 416, 531, 551); [M]ykonos (Dél 182, 362, 433); Rheneia (Dél 368); Syros (Dél 298, 375, 381, 388, 625); Te[nos] (Dél 394, 540); Keos (Dél 351); Seriphos (Dél 385); Karystos (Dél 243, 284); Knidos (Dél 287); and Thera (Dél 290).

Occasionally, specific collaborations can be detected, which suggest that a group of colleagues were bidding for a planned project. These included Alexikles of Seriphos, Nikon of Syros, Molpion of Rheneia, and Demophilos, perhaps a Delian, who collaborated on a set of inter-related contracts during 279 BC (Dél 19, 146). Xenophanes of Syros (Dél 398) collaborated with Deinokrates, son of Leophantos (Dél 126), and Theophantos of Karystos (Dél 243) on a different set of contracts in 279 BC (Feyel 262). Those workers who came from further afield included Megarians (Dél 344); an unnamed Chian (Dél 556); and named individuals from Thebes (Dél 21); Chios (Dél 229); Assos (Dél 156); Klazomenai (Dél 38); Mytilene (Dél 63); [Le]mnos (Dél 464); Korinth (Dél 74); and an unnamed man from Sinope (Dél 629). The list does not do justice to all the overseas connections that the sanctuary of Apollo could draw on (Feyel 352–4 and Map 10a, p. 352).

One of the most striking aspects of the Delian evidence is the emphasis it gives to ephemeral contractual relations. Feyel calls these workers ‘birds of passage’—employees taken on for a brief period, or a carefully specified task, who were then, we must assume, obliged to move elsewhere. At Delos they appear as nameless individuals or groups, employed to carry out specific jobs (Dél 658–720). At Eleusis there were unnamed *misthōtoi* (El 172–3), ‘paid people’, as well. More than 50 per cent of the workforce sampled appear only once in the Delian accounts (Feyel 335–6). The commissioners had to maintain a careful balance between their obligations to the island community—a factor that shaped the financial strategy from one year to the next—with their medium-term duties of construction, maintenance, and repair. Recruitment and retention were issues of some concern from their point of view. The development of tenders for projects, contracts for certain named individuals, differential remuneration, occasional bonus payments, as well as fines for jobs that were not carried out, were among the regular tactics deployed to fulfil these different obligations (Feyel 395–510). Such carrots and sticks were evidently the main methods considered workable in the face of a hugely

diverse workforce, with a tiny number of ‘project managers’, who might be retained for up a decade or more (Nikodamos, the Argive, supplying wood at Delphi, then providing the levers: Feyel D95; Dexios, a metallurgist at Delos, providing a wide range of greater and lesser projects : Dél 131). Sculptors are, incidentally, rehabilitated as among the best paid and most prestigious artisans (Feyel 411–15).<sup>28</sup>

Feyel’s catalogues and tables can be mined profitably for a great deal more information about the organization of public projects. The preponderance of metics in Attika took the place of other outsiders, lured to specialist work (Feyel 342–8). The fourth century accounts from Delphi reflect one of the widest catchment areas for expertise, although it does reflect the predominantly mainland networks of the Amphictyony (Feyel 348–9, Map 7). Perhaps the most surprising outcome of this research is the evidence it presents about the range of expertise that an individual might be expected to demonstrate. The very notion of specialization must be heavily qualified. Only one group of artisans seems to have retained a narrowly defined expertise, namely metallurgists. Other workers could put their hands to many tasks, although individuals do seem to have worked with a particular material, if necessary from its natural source to its destination (Feyel 373–94).

## INCENTIVES

One of the missing elements in our picture of recruitment is the nature of incentives to leave the homelands which were exporting personnel. It has often been assumed that farming populations are comparatively static. But records of population turnover in various parts of medieval Europe show that even in relatively stable environments, as much as half the population of a country village was likely to change within the space of a decade. Equally surprising, perhaps, is the fact that the same proportion of rural dwellers was likely to be composed of newcomers.<sup>29</sup> In Attika, where deme membership ought to have acted as a considerable disincentive from moving outside one’s own deme, Robin Osborne found that a significant minority of fourth- and third-century BC demesmen chose to be buried outside their deme. Using funerary inscriptions to chart how far men from Kerameis, Kephale, and Rhamnous were buried, he discovered that more than a third of documented burial monuments from Kerameis and Kephale were to be found in other parts of Attika (Osborne 1991: 239–43). At Rhamnous the proportion was much smaller, about one seventh of his sample. The documented cases have little statistical

<sup>28</sup> Lefèvre 2004: 102 n.10; Oliver 2007: 94 and n. 152 with further refs on travelling sculptors.

<sup>29</sup> Osborne 1991: 234; on the fluidity of rural populations, Wrightson 1982: 41–4.

value. But Osborne noted that even these small samples suggested that Peiraeus harbour was a particular magnet for inhabitants of city demes, and compared his findings with a different group of documents that includes demotics, namely a set of 156 Attic manumission inscriptions, which also indicate a visible preference for residence in city demes and Peiraeus (Osborne 1991: 244–6).

The real object of Osborne's investigation was a question about land exploitation. The problems associated with the tradition of partible inheritance are well known. Sales and leases of land, though often underplayed in our sources, provided some elasticity in this system, but the degree of elasticity depends on the particular ways in which communities chose to manage their assets. The easiest way to enhance land assets, of course, was simply to acquire them by force. This is likely to have been one of the principal factors that either encouraged or discouraged outward (and, indeed, inward) mobility. Chaniotis has provided some clear examples from the second half of the second century BC in the east Cretan cities of Knossos, Lyttos, Gortyn, and Hierapytna (Chaniotis 2005: 131–2), whilst the new kingdoms in Asia were the most conspicuous and enticing acquisitions. The case for near-constant mobility, by significant numbers of people, for limited periods of time, if not permanent displacement, as Feyel's 'migrant birds' show, has not been overplayed, even if those in motion were always a sub-set of the population at large (Horden and Purcell 382). The real difficulty for the researcher is how to gauge these moving targets. The emergence of the greatest city in the Mediterranean, during the third and second centuries BC at least, Alexandria, was the most visible magnet for migration.

We can gain a broad perspective on movement by looking at the long-term results of such processes, from survey data. The most noticeable change in the Seleukid realms is exactly where we would expect it to be, namely in northern Syria, where the largest investment in city building took place.<sup>30</sup>

## INNOVATION AND SOCIAL NETWORKS

How should we evaluate the level of mobility in the eastern Mediterranean and adjacent regions during the final three centuries BC? Was it greater than in earlier or later times? Numerical estimates of migration are imprecise, even in contemporary contexts. Aside from census returns and commercial surveys, more nuanced data collection is carried out comparatively rarely. The field-work carried out by Chapman Murray in Melanesia for several decades,

<sup>30</sup> Aperghis summarizes the data on city building (56; id. 2005, esp. 31); cf also Wilkinson 1999; Alcock 1994; Alcock et al., 2003; Grainger 1990.

beginning in the mid-1960s, reveals the care and persistence required to observe and record the mobility of individuals within specific communities (Bedford 1999). In order to demonstrate the evidence empirically, a highly focused and carefully articulated project is required. Historians of the last two hundred years have been able to draw on data collected by family history societies in order to accumulate coherent evidence about the mobility patterns of family members (Pooley and Turnbull 1998). The quality of such evidence, either on the macro level of census data, or on the micro level of individual communities, is simply unavailable for Antiquity, except in a highly syncopated form. This does not make it worthless, but it requires a clear theoretical framework in order to acquire coherence and plausibility.

It may at first seem daunting to realize that the outcomes of mobility and innovation are contingent. ‘The irregular distribution that generates exchange is not, in most cases, the ineluctable consequence of the physical givens. It is highly contingent. It mutates from season to season; but it also responds to the ever-shifting “social construction” of commodities, which are as much a creation of the social and economic framework as is the fertility of the soil’ (Horden and Purcell 344).<sup>31</sup> The fact that historical data reflects highly specific circumstances is precisely what makes the evidence of known outcomes so valuable as evidence.

In order to conceptualize late first millennium BC mobility we need to do more than provide a narrative that could be compared with Simon Schama’s characterization of seventeenth-century Amsterdam. We need to understand the parameters that shaped human dynamics in the Mediterranean region, the social and cultural or behavioural constraints and drivers, which may well have been differently configured in comparison with recent patterns of mobility (where the infrastructure of urban life modifies social structures as well as employment opportunities). Late prehistoric travel may be expected to have played a contributory role, by shaping the underlying social and environmental patterns of mobility (Horden and Purcell 133–4, 143–52).

I have already referred to the fact that the kingdoms of the Successors were effectively linked by a matrix of social networks. As an abstract concept, networks have been explored since the eighteenth century. Systematic research into dynamic social networks began in the 1960s and has advanced significantly during the last two decades, through the active collaboration of mathematicians, physicists, economists, and social scientists. Social network theory has begun to be applied in historical contexts, including Mediterranean Antiquity.<sup>32</sup> The nature of much ancient evidence means that extrapolations are easier to base on inter-community contacts than personal ones. Published spatial

<sup>31</sup> Cf Watts 2003: 249–50; see further below.

<sup>32</sup> Watts 2003: 19–100 for a survey of relevant scientific research; cf Manning, this volume, n. 1 and discussion; Oliver, this volume.

network simulations often therefore represent inter-community contacts in terms of collective links, even though networks are predicated on person-to-person contacts.<sup>33</sup> Research on social networks has evolved as a result of experiments indicating that every individual is, in principle, separated from every other individual on planet earth by a mere six degrees—in other words, by six inter-personal links, irrespective of the numbers of individuals. This evidence seems counter-intuitive, because, as individuals, we are aware of the social barriers and geographical distances that separate us from others. The questions that now need to be answered, therefore, concern the nature of the social as well as spatial distances within networks, since the patterns of social construction are evidently not all of the same kind.<sup>34</sup>

The articulation of social networks explains not only how individuals are connected to each other, but also how information circulates within social groups. Expertise, which in the ancient world effectively required person to person contacts, diffuses along social networks.<sup>35</sup> The contracts of work issued by the administrators at Delphi, Delos, and elsewhere show that those who commissioned building projects were deeply concerned with the quality of the outcomes and shaped the terms on which contracts were given accordingly. Completion and specific conditions were more important than time factors, although time scales were certainly taken into account, because of wider cost implications (Feyel 336–9, 395–417). The fact that a small number of named individuals, such as Nikodamos of Argos, working at Delphi between 356 and 336 BC, or Pankrates of Argos, also at Delphi (344–329 BC), were employed sometimes for years at a time shows that certain experts were very highly trusted (Feyel 355). It is more than likely that such people were commissioned on the basis of prior reputation or on recommendation. Social network theory postulates that recommendations would arise from personal contacts within the commissioning circles, although such contacts might arise from persons on the periphery of an individual's immediate acquaintance. Experiments show that individuals most commonly appeal to those they know in terms of two parameters—geographical or occupational (Watts 2003: 132–61). In the Hellenistic period, both of these parameters were transformed through the rapid acquisition of large territorial units by a leadership drawn from a socially integrated background in Macedonia, but whose experience and aspirations expanded dramatically with military success. These military assets needed to be transformed into permanent political ones. The Successors could only

<sup>33</sup> e.g. Evans, Knappett, and Rivers 2007; see the contributions to *Networks*; Archibald 2007.

<sup>34</sup> Watts 2003: 70–129; see Van der Leeuw and de Vries 2003: 211–23 for an analysis of the Roman Empire using a similar approach.

<sup>35</sup> '[K]nowledge diffusion is not only a geographically spatial phenomenon, it is also a "socially spatial" phenomenon. That is, the more closely connected socially I am to the originator of a piece of knowledge, the more quickly I will learn about it' (Cowan 2005: 31); cf Almeida and Kogut 1999.

achieve the political objectives by making maximum use of their existing networks and by enhancing these. As leaders they nevertheless retained their military roles, which, compared with their counterparts only a century earlier, had become highly technical. Some military commanders, such as Demetrios the Besieger, had become technicians in their own right, whilst technical experts (the architects of siege engines, catapults, artillery, fortifications, and navies), were sometimes formidable enough to aspire, for the first time, to leadership roles (Cuomo 2007: 41–76).

If we put together the evidence from building contracts and from recruitment policies, it is clear that many of those who travelled opportunistically were the less skilled and were less likely to put down roots in new locations, except where energy mattered more than expertise. The more highly skilled were also more desirable, both as settlers and as specialists. The strong presence of Greek and Macedonian names among the groups exempt from payment in Ptolemaic tax registers (as well as some other ethnic groups officially enjoying the same tax status), listed as teachers, doctors, administrators, vintners, fullers, and other skilled occupations—and the fact that these same groups also held more land and livestock than their Egyptian counterparts, points to the fact that they were selected for their skills and talent. These individuals represent specialist experience brought in from outside in order to establish new techniques and practices, and experiment with local ones (Clarysse and Thompson 1.344, 346). It was these kinds of individuals whom the Successors needed to create the cultural order of the emerging kingdoms.

In the terminology of social network science, the kingdoms of the Successors constitute a number of especially interesting phenomena. These kingdoms represent, collectively and individually, a ‘small world’ network, that is, one in which any ‘node’ is only a few steps away from any other ‘node’ (in contrast to purely random networks on the one hand, or fragmented ones on the other: Watts 2003: 78–83). Moreover, for the period under consideration here, the largest ‘nodes’ within a wide configuration of civic centres were not merely hubs within a matrix of ‘nodes’ but ‘super hubs’. Alexandria, Seleukeia, and Antioch on the Orontes were an order of magnitude greater than the next level of cities by size.<sup>36</sup> What makes these giant hubs particularly interesting is the fact that these new concentrations of people outgrew all other contemporary cities. They benefited from their parallel roles as the effective headquarters of the Ptolemaic and Seleukid kings. The kings not only acquired the overall management of the unrivalled resources within their territories. They

<sup>36</sup> Pliny (*HN* 6.122) gives 600,000 inhabitants for Seleukeia; Diodoros (17.52.6) has 300,000 ‘free’ inhabitants in Alexandria, which translates into a total population count of c.500,000 in the first century bc. This figure needs to be reduced for the third to second centuries; Clarysse and Thompson (1.102) do not hazard an estimate, but accept a population in Egypt as a whole at 1,500,000 by the mid-third century bc.

also put into circulation some 3000 tonnes of coined money, which boosted the scale, volume, and speed of transactions, even if the actual coins passed into the hands of a minority.<sup>37</sup> The enlarged pool of inhabitants in their domains received an injection of cash, further streamlined by the development of a variety of public projects, while the dynamic was maintained by new forms of taxation.<sup>38</sup> The size of the largest urban centres implies a scale of inward migration that is much larger than the social units documented in narrative sources. Bearing in mind the high mortality rates of cities, the capacity to supply even the small number of very large cities requires a level of migration measured in many hundreds of thousands, not the tens of thousands recorded for named groups.<sup>39</sup>

What remains to be understood is how the human capital of the new kingdoms was structured, because this would also help us to understand how efficient communication was and thus how innovative ideas travelled. The officials responsible for the collection of census data and tax receipts represent one of the social mechanisms that linked the whole population of Egypt. The social and cultural relations between Greek-speakers, ethnic Egyptians, and others, were complex—highly creative in material terms, rather more conservative from a social perspective. Nevertheless, within a ‘small world’ network, even a few links between separate groups or parts of a structure can have dramatic effects on the network as a whole. This implies that communication across communities was much more profound than conventional analyses of cultural interactions imply, because many inter-personal links constituted relatively close networks, even if randomly-organised components or fragmented units were also present.<sup>40</sup>

One highly visible expression of the new economy is represented by the fabulous processions that provided a new vocabulary for the Hellenistic kingdoms, as reported in descriptions preserved in Athenaeus (*Deipnosophistae* 5.201b–203e = Kallixeinos of Rhodes, *FGrH* 627 F2: the *Ptolemaieia* of 279/8 BC or slightly later)<sup>41</sup> and Polybios (Plb. 30.25: the pageant at Daphne, 166 BC). Previous commentators have analysed the social and economic significance of the two processions. These kinds of events were undoubtedly opportunities to

<sup>37</sup> Le Rider and de Callatay 2006: 225–6, cf 166–70, 270–83 on the role of coined money and uncoined metal within the Ptolemaic and Seleukid economies.

<sup>38</sup> Von Reden, this volume; van der Spek and Manning, this volume.

<sup>39</sup> In an extended argument about the influx of slaves into Republican Italy, Scheidel (2005: 78) refers to the 150,000 Epirotes allegedly sold into slavery by Aemilius Paullus in 167 BC (Plb. 30.15), in a single march to the Adriatic coast. As Scheidel emphasizes, this was an extraordinary and exceptional figure, but it underscores the scale of mobility throughout the Mediterranean area.

<sup>40</sup> Watts 2003: 82–3, 99–100; for the extraordinary variety of cultural phenomena in Alexandria, see the contributions to Green et al. 1996.

<sup>41</sup> Austin<sup>2</sup> no. 258, with full refs and discussion of dates. See also Le Rider and de Callatay 2006: 175–9, 271–83.

present the wealth and military capacity of the Ptolemaic and Seleukid rulers to a wider audience. Such public events were multivalent. They manifested what the power of Alexander's Successors amounted to and the magnitude, and range, of their resources. But these were also events that communicated the stunning and innovative character of cultural products. The events combined elements of an agricultural show and an international fair.<sup>42</sup> Animals were not chosen simply to display exotic species. At Alexandria there were indeed exotic creatures, but many of the herd animals were of interest as livestock—Ethiopian and Arabian as well as Euboean sheep, for example. The management of livestock, and the fostering of new breeds, were of particular interest to colonists originating from inland areas, such as Macedon and Thrace, where stock breeding was a particular and well established specialism. The success of Macedonian farming enterprises as centres of stock breeding has only begun to be appreciated more fully with the discovery of building complexes that evidently served these purposes (Adam-Veleni et al. 2003). The parade of military units was a deliberate demonstration of fighting power,<sup>43</sup> but the other components of the processions represent something altogether different. Kallixeinos, in the passage quoted by Athenaeus, comments on the extraordinary size of some of the exhibits—the golden thyrsus 90 cubits long (135 ft; 41.15 m), or the golden phallus, a third as long again—and on the size of the columns used to support statues (again, of gold), representing Ptolemy II and his son. Although the immediate audience may have been more interested in the richness of some of the materials used, the designers, and those who commissioned them, were at least equally interested in conveying a new idea of scale and new approaches to technical challenges. It is no coincidence that Athenaeus' additional comments on Ptolemy Philadelphos refer to the king's interest in very large ships. Some aspects of the massive expansion in sea-faring and in hull design that took place in the third century BC, both in the western and eastern Mediterranean, are still hard to appreciate.<sup>44</sup> There had always been synergies between commercial shipping and naval vessels, and it is likely that commercial ship design benefited from developments in naval craft. Philadelphos' ambitious plans for the expansion of commercial traffic in the Indian Ocean are predicated on such developments.

## CONCLUSIONS

Comparisons between migration in the early modern period and the Hellenistic age provide insights into the motivation and dynamics of travel, while the

<sup>42</sup> Stewart 2006: 162, for a similar analysis.

<sup>43</sup> See Walbank 2002b: 86–9.

<sup>44</sup> See Gibbins's review of Hellenistic shipwrecks (2001).



science of social networks provides a method for understanding the complexity of social structures in Hellenistic states. The nature of social structures also has implications for the ways in which information and innovative processes were transmitted across these social networks. This approach implies that mobility was more significant than recorded figures suggest and innovation more widespread. Such abstract formulations nevertheless have support from other current research, whether in terms of numbers of migrants (as represented through the most recent analyses of papyrological evidence), or of the nature of innovative practices (as based on current interpretations of technology).

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## Grain from Cyrene

ALAIN BRESSON

According to ancient tradition, Cyrene was founded around 631 bc.<sup>1</sup> Other smaller settlements like Taucheira, Barke, or Euesperides were founded in the following years or decades.<sup>2</sup> In the first three centuries of their existence, these cities, particularly Cyrene, experienced rapid development. Sacred or public constructions testified to the prosperity of this city. Trade relations with the rest of the Greek Mediterranean were active. One of the main sources of prosperity was certainly grain. As early as the Classical period, Cyrene became one of the grain baskets of the Greek world. Yet the history and scale of grain production and export from Cyrene remain largely in the dark. The rarity or obscurity of written documents might be thought responsible for this uncertainty. Exploration of the Cyrenean *chōra* has recently opened up new perspectives, which makes it feasible to come back to this issue.<sup>3</sup> Moreover, P. Horden and N. Purcell have brought a new dimension into the debate with challenging views in their pioneering survey, *The Corrupting Sea*.<sup>4</sup> It is time to follow the way opened up by these scholars and to propose a new reading of the Cyrenean grain supply, which tries to combine the results of environmental, archaeological, and institutional approaches.

### CYRENAICA: GREEN LAND AND GRAIN LAND

The ecology of Cyrenaica is the key to understanding the exceptional development of grain production in this region.<sup>5</sup> East of Tunisia and up to the Nile,

I would like to express all my gratitude to C. Dobias-Lalou for her help in Cyrenean matters as well as to the editors of this volume for their assistance in the preparation of this paper.

<sup>1</sup> Chamoux 1953: 115–127; Graham 1982: 133–8; Austin 2008. Ancient sources on Cyrene: Thirge 1828.

<sup>2</sup> Austin 2004: 1235–7 and 1240–9.

<sup>3</sup> Laronde 1987*a*, with 1985, 1989, 1990, 1993, 1994, 1996*a* and *b*.

<sup>4</sup> Horden and Purcell 65–74.

<sup>5</sup> Chamoux 1953: 11–17; Horden and Purcell, *ibid*.

the coastal part of northern Africa is a completely desert area. It is in fact nothing other than the northern fringe of the Sahara. In this inhospitable zone, two regions are exceptional for the quantity of rainfall they receive. Coming from the west, the first one is the region of Lepcis, in Antiquity settled by the Phoenicians. The second one, which receives even more rainfall and is far larger than Lepcis, is Cyrenaica.<sup>6</sup> There, a mountain ridge, now known as the Jebel Akhdar or 'Green Mountain', climbs to more than 800 metres and offers a barrier to western winds. Along the coast of northern Africa east of Tunisia, Cyrenaica enjoys a level of precipitation that reaches 600 millimetres per year in the highest areas. Water-springs are not rare. Although there is no permanent river, numerous *wadis* running from the south to the north make deep cuts in the landscape. After a coastal plain, quite narrow in the eastern part of Cyrenaica (only one kilometre wide), but much larger to the west, the relief consists of two levels of karst plateau, well marked in the landscape by two lines of cliffs. They form a natural stronghold, 400 kilometres long in an east-west direction and 150 kilometres wide in a north-south one. The first level, at an altitude of 200–400 metres, is mainly occupied by forest. On the second level, above 500 metres, rainfall is more abundant. On the first level of plateau (to the west) or second level (in the central region), large pockets of *terra rossa* (red soil) provide the best possibilities for grain production, while other zones also provide good possibilities for arboriculture. The two main cities of Greek Cyrenaica were Cyrene, in the central zone and on the second plateau, and Barke, in the western zone and on the first plateau. The former was situated in the immediate vicinity, the latter in the middle, of the most favoured agricultural lands. A similar situation in the middle of the pockets of *terra rossa* holds true even for the smaller coastal settlements of Euesperides/Berenike, the port of Barke/Ptolemais, the port of Cyrene/Apollonia/Sozousa and Darnis. On the whole, the best agricultural land represented a minimum potential of 2,000 square kilometres, while a much larger zone offered less promising possibilities. From the higher plateau, slopes fall gently to the south. In this direction, rain becomes rare. The agricultural potentialities are quickly reduced, except for transhumant herds and a vegetation of steppe that finally gives place to desert.

This landscape explains why Cyrenaica has often been compared to a large Mediterranean island that would have been appended to the Sahara. Its Mediterranean climate and vegetation (at least on all the northern part of it) make it more similar to Crete or southern Greece than to the neighbouring desert regions. It is thus no accident if Cyrenaica attracted the interest of the Greeks, who encountered there a local population with whom they obviously

<sup>6</sup> For the ecology of the region, see Evans-Pritchard 1949: 29–40; Johnson 1973: 1–21; Girgis 1987: 174–7. Geology: Bousquet and Péchoux 1983; economy and population on the *longue durée*: Reynolds and Lloyd 1996: 622–30.

intermarried. But whatever the degree of intermarriage of the first waves of colonists with the Libyan natives or the continued presence of an indigenous population, the Greek cultural pattern soon became dominant in the regions of the first and second plateaux. In a typically colonial pattern, the Libyans who kept their traditional way of life were pushed out onto marginal land, where they practised their traditional transhumant animal husbandry.<sup>7</sup> The larger part of the productive agricultural land was in the hands of Greek settlers, with the caveat on their Greekness mentioned above. There they installed a dense network of agricultural farms, equipped with cisterns. A number of them have been archeologically identified. The Libyans were traditionally herders. If due to the ecological constraints of the region the way of life of the ancient Libyan herders was more or less similar to that of the modern Bedouins, one can easily understand the long-term history of both coexistence and frequent conflict between the indigenous population and the colonists. As the Greeks had taken control of the best land of the first and second plateaux, this made it impossible to the Libyans to perform their traditional migrations.

The first Greek colonists came from Thera. According to the tradition of Herodotus (which can be supplemented for institutional aspects by a Cyrenean inscription of the fourth century), after a long period of drought they were forced by hunger to leave their island.<sup>8</sup> The real colonisation process was probably more complex. A long phase of pre-colonial contacts preceded the first installation in the small island of Bomba, on the Cyrenean coast. But it is still perfectly convincing that it was hunger that drove the first waves of colonists to the coast of Africa. They were quickly supplemented by new settlers coming from southern Greece. The tribes of Cyrene and several traditions are unequivocal on the composite character of the population of Cyrene. This means that the colony was a success: more land was offered to cultivation and more colonists would provide a larger force against the natives.

But all the colonists came from Doric-speaking regions. Cyrene developed a special dialect that belongs, nonetheless, to the Doric family.<sup>9</sup> From the linguistic viewpoint, Cyrene was part of a southern Aegean, mainly Doric network. Proximity with Crete, at a distance of 300 kilometres only, is famously illustrated in the Roman period by the creation of the common province of Crete-Cyrenaica.<sup>10</sup> The pottery from the sites of Taucheira, Cyrene, and Euesperides testify to a close relationship with Corinth, or cities of the Corinthian network.<sup>11</sup> It was with the southern islanders or with the

<sup>7</sup> Reynolds 1987; Jones et al. 1998; Laronde 1993.

<sup>8</sup> Hdt. 4.150–3; *ML* no. 5, with Graham 1964 [1983]: 224–6, and Cawkwell 1992 on climatic crisis (not ‘overpopulation’) at the origin of the colony.

<sup>9</sup> Dobias-Lalou 2000: 6–10, 291–3 and *passim*.

<sup>10</sup> Reynolds and Lloyd 1996: 631 (see Dio 53.12.4).

<sup>11</sup> Taucheira and Cyrene: Laronde 1996a; Euesperides: Wilson 2006.

cities of Peloponnese that Cyrene entertained the closest political or financial relations. This does not mean that Cyrene lived in isolation from other regions. Around 570 BC, the Egyptian pharaoh Apries failed in his attempt to conquer the country.<sup>12</sup> Later, however, under Cambyses, the country fell under the control of the Persians.<sup>13</sup> Even the west, Tripolitania and the regions of the western Mediterranean under the control of Carthage, was in contact with Cyrenaica.<sup>14</sup> But from the Archaic down to the Hellenistic periods the closest relations were with southern Greece.

As early as the sixth century, an active trade developed between Cyrenaica and Greece. Silphion, a highly esteemed medicinal plant that grew only in Cyrenaica, offered at an early date a valuable export product. The famous Lakonian cup of the middle of the sixth century representing King Arkesilas II supervising the weighing of silphion proves the existence of trade in this product at so early a date.<sup>15</sup> Textiles, especially highly valuable purple-dyed woollen ones, were certainly exported.<sup>16</sup> However, grain must have been the most important item of export, at least for Cyrene itself. When did the export of grain begin? No sixth- or fifth-century source provides any direct information on the grain exports of Cyrene; from Herodotus however (4.159.1–5), we know that the great wave of Greek immigration from the Aegean took place under King Battos II (c.583–560 BC). The new immigrants seized great tracts of land from the indigenous population, and this was precisely the origin of the appeal of the Libyans to Pharaoh Apries. Thus the first development on a large scale of Cyrenean agriculture dates back to the second quarter of the sixth century. The agricultural potential obviously grew in the following period. It is a safe assumption to consider that at the end of the Archaic period Cyrene already exported sizeable quantities of grain towards the Aegean world. In Classical times these quantities rose at the same pace as the demand grew in this region.<sup>17</sup>

From what can be observed from later documents, one can legitimately consider that the Cyreneans sold their grain to the cities of southern Greece, among them Athens, but in our sources no element has survived that could illustrate these exports. This raises the issue of Cyrenean export to Athens during the Peloponnesian War. Cyrene favoured the Spartan side, as is proved by the help this city could provide to a Spartan squadron which on its way to

<sup>12</sup> Hdt. 4.159.4–5.

<sup>13</sup> Mitchell 1966, who argues for an end of the Persian rule in the 450s.

<sup>14</sup> See the provisional results of excavations at Euesperides in Wilson 2006.

<sup>15</sup> On the cup of Arkesilas Bresson 85–94, and on silphion Amigues 2004 with previous literature.

<sup>16</sup> Wilson 2006.

<sup>17</sup> For a similar evolution in the northern Pontic region, see Bresson 2007. On Cyrenean agriculture, see also Dobias-Lalou 2000: 195–203 (epigraphic sources).



Sicily had been driven by the wind on the Cyrenean coast.<sup>18</sup> But all Cyreneans were not hostile to Athens. Both a passage in Demosthenes and an Attic decree of 405/4 in favour of a Cyrenean benefactor, Epikerdes, suggest that the man had a strong connection with the city. He gave 100 minas (or one talent and 4,000 drachms) to help the Athenian prisoners in Sicily after the disaster of 413, thus preventing them from dying from hunger. Later, in 405/4, before the installation of the Thirty Tyrants, he gave one talent to the people of Athens.<sup>19</sup> Was he a 'businessman' who had previously links with Athens? Or had his connection to Athens other bases? It is regrettable that we do not know more about him, but this is at least enough to prove that Athens had entertained relations with Cyreneans as early as the fifth century. In the middle of the fourth century, an Athenian decree grants proxeny to some Cyreneans who have helped an Athenian in their home city.<sup>20</sup> This help might have been provided in the context of a grain transaction, but unfortunately this remains only a hypothesis, if an attractive one.

## SAVING THE GREEKS

The key document for the grain export of Cyrene is a famous inscription of the fourth century found in Cyrene, reused in the *frigidarium* of the Byzantine baths.<sup>21</sup> The stone, a big white marble square stele, bore on two other faces the famous sacred Law of Cyrene, the fourth one being void. For C. Dobias-Lalou (*per litt. electr.*), it has a good chance of having been erected in the sanctuary of

<sup>18</sup> Thuc. 7.50.2.

<sup>19</sup> Dem. 20.41–2 (*A. Leptines*); *IG I<sup>3</sup>* 125, with comments by Meritt 1970 (who republished the text of the previous edition *IG I<sup>2</sup>* 174, with a new fragment and improved restorations); Pritchett 1991: 272–3; Bielman 3–7, no. 1; MacDowell 2004. Pritchett, Bielman, and MacDowell show that (contrary to Meritt's view) the 100 minas of 413 were not aimed for buying the liberty of some citizens, but at providing food to Athenian prisoners in general. As for the gift of 405/4, nothing definitely proves that its aim was buying grain. Bielman sees in Epikerdes an Athenian metic and a merchant. MacDowell considers he might have been a grain trader, and that in both cases Epikerdes' gifts would have been linked to this activity (but for the second gift see above). This would be an appealing parallel with Leukon, the *archōn* of Bosporus, also mentioned by Demosthenes in the same speech, who sent grain to Athens. Besides the fact that Epikerdes did not make use of his privilege of tax exemption (*ateleia*), as stressed by Demosthenes (20.44), proves that he or his sons were rich enough to afford behaving this way.

<sup>20</sup> *IG I<sup>2</sup>*. 176 with the suggestion of a possible grain agenda by RO 491.

<sup>21</sup> *Ed.*: *SEG IX* 2; Oliverio 1933; Laronde 1987a: 30–4, with a new edition (and improvement by C. Dobias-Lalou), detailed comment and map of the shipments; Marasco 1992, with full lemma and comment; RO 486–93, no. 96, with useful notes on the political context. *Comm.*: Kingsley (1986) for a date before 330, which cannot be followed; Garnsey 1988: 158–62 (with map p. 160) on the issue of famine in Greece; Brun 1993 on the list of cities (no mention of Lesbos or Tenos); Bresson 135–7; Horden and Purcell 59–74, on the general ecological context; Pazdera 2006: 142–59 and 261–2.

Apollo.<sup>22</sup> It records a list of persons or states that benefited from Cyrenean grain in the difficult circumstances of a *sitodeia*, a grain shortage that struck Greece at a date which the identity of the beneficiaries obliges us to situate around 330 BC or rather at the beginning of the 320s, but which deserves further comment. The text begins thus: [ἰαρε]ὺς Σωσίας Κα[λλιὰ]δα. | [ὅ]σσοις σῖτον ἔδωκε ἁ πόλις, | ὅκα ἁ σιτοδεία ἐγένετο | ἐν ταῖ Ἑλλάδι, ‘Priest Sosias, the son of Kalliadadas. List of those to whom the city provided grain when the grain shortage took place in Greece’.

In its apparent uniqueness the document seems to discourage the most optimistic scholars. As far as one can judge from the recent verdict returned by P. J. Rhodes and R. Osborne the situation seems to be almost hopeless:

This text records the distribution of 805,000 *medimnoi* of grain to cities and rulers in mainland Greece and the islands during a grain shortage. But this apparently straightforward text is in almost every respect obscure. We do not know how much grain was involved because we do not know whether the Attic or Aeginetic/Lakonian *medimnos* is being employed . . . We do not know what grain was involved, wheat or barley. We do not know whether the grain was sent in a single year or more than one year. We do not know in which year or years the grain was sent. We do not know whether the grain was indeed a gift or was supplied at less than the current market price. We do not know why Cyrene sent the grain.<sup>23</sup>

Indeed, the document has some obscurities that are hard to overcome. But some issues like the mode of grain shipping, the beneficiaries to whom it was sent, the motive for the erection of the stele, and the quantities sent deserve a detailed analysis that can help partly elucidate the meaning of this admittedly difficult document.

The list has some peculiarities. This is not properly a list of beneficiaries, but a list of fifty-one deliveries or shipments. Forty-three beneficiaries are mentioned. Forty-one of them are Greek cities. But there were also two well-known characters, Queen Olympias, Alexander’s mother, and Queen Kleopatra, Alexander’s sister, who ruled Epirus after the death of her husband Alexander in 330 in Italy.<sup>24</sup> The beneficiaries are carefully ranked in decreasing order of the deliveries (see Fig. 4.1), from the 100,000 *medimnoi* sent to the Athenians (the first to be mentioned in the list) to the 900 sent to Knossos. In eight cases (see Table 4.1) the same beneficiaries appear twice (and never more than

<sup>22</sup> ‘Il est vrai qu’il y a dans ces thermes des colonnes remployées qui ont été démenagées d’un quartier assez distant et il n’est pas exclu que ce gros pilier ait été originellement exposé sur l’agora. Mais il faut tenir compte du fait que deux autres faces portent la grande loi sacrée, donc je pencherais plutôt pour une exposition dans le sanctuaire.’ Sacred law of Cyrene: Dobias-Lalou 2000: 295–309.

<sup>23</sup> RO 488–9.

<sup>24</sup> Carney 2006: 51, who rightfully stresses that the two queens acted as heads of states.

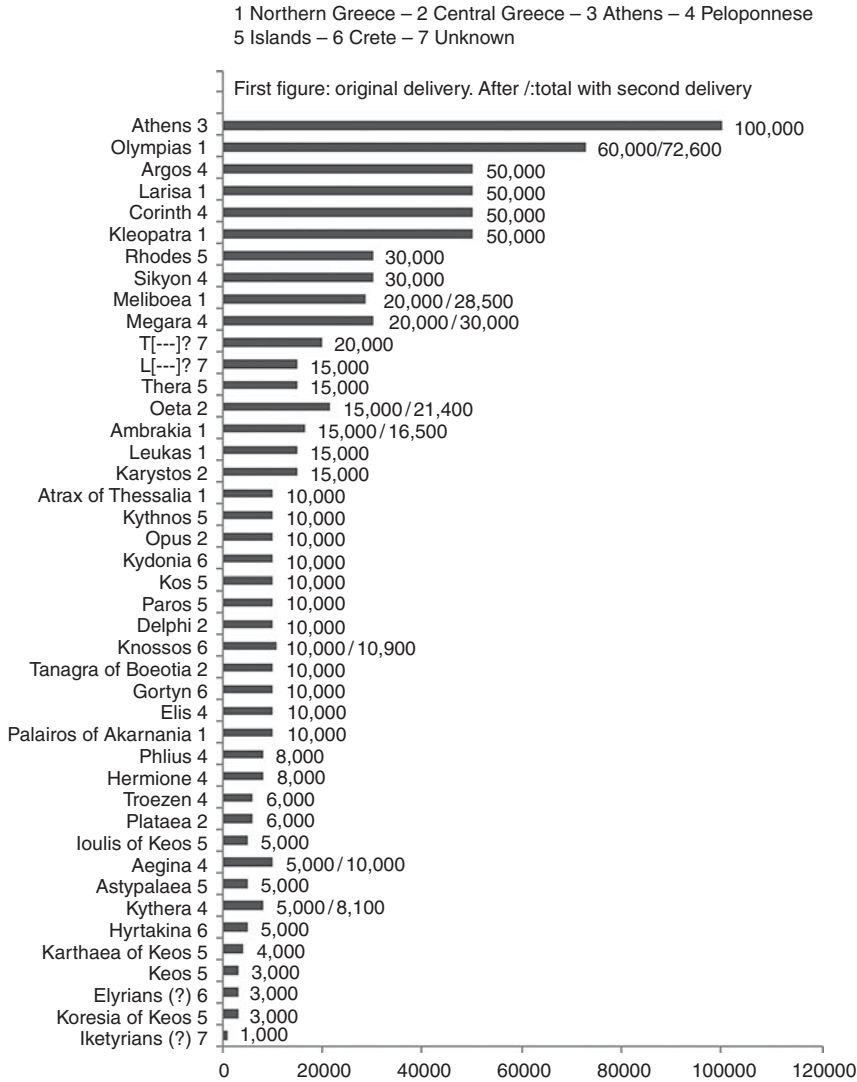


Fig. 4.1. The beneficiaries of the Cyrenean grain (quantities in *medimnoi*)

**Table 4.1.** Grain exports from Cyrene to eight Greek cities

Beneficiary Lines	Olympias 6+22	Meliboea 13+37	Megara 14+36	Oeta 18+41	Ambrakia 19+56-57	Knossos 31+59	Aegina 46+50	Kythera 48+52
1 <sup>st</sup> amount	60,000	20,000	20,000	15,000	15,000	10,000	5,000	5,000
2 <sup>nd</sup> amount	12,600	8,500	10,000	6,400	1,500	900	5,000	3,100
<i>Total</i>	<i>72,600</i>	<i>28,500</i>	<i>30,000</i>	<i>21,400</i>	<i>16,500</i>	<i>10,900</i>	<i>10,000</i>	<i>8,100</i>

twice). Only in one case (Aegina) is the second amount equal to the first one: in the seven other cases it is smaller, sometimes much smaller.

As there is nothing to suggest that the agreements to send grain were made in that special order, this shows a careful *a posteriori* arrangement of the list. But it also shows a deliberate intention to let different agreements to send grain be kept separate in the final register, as, for these eight beneficiaries at least, there was no summation of the different amounts which they had received. This may help us to understand the process by which the decision to send grain was made. In this circumstance of general grain shortage, it seems likely that the several cities sent to Cyrene grain commissioners (*sitōnai*) to negotiate an export licence for grain. But what the list suggests is that this was not always performed in a single operation. What seems the best explanation of the double references is that when individuals or cities realized that they would need even more grain than they initially expected, they had to send *sitōnai* a second time. They received a second agreement, and the list has thus preserved the different phases of this process. The fact, explicitly stressed by Herodotos (4.199), that in Cyrene the harvest took place in three phases (first on the coast, then on the 'Hills', then on the superior plateau) may also perfectly justify these several shippings.<sup>25</sup>

The sending of *sitōnai* may help us understand both the high number of states that had asked for this concession from Cyrene and had obtained it, but also the equally high number of states that are not mentioned in the list. For instance, if the main Cretan cities (among them Gortyn and Knossos) appear in the list, many smaller Cretan states do not. This is also the case for many Aegean islands: for example, why is Paros mentioned but not Naxos? All the editors have underlined the fact that the two great southern Peloponnesian states, Sparta and Messene, were not recorded. Nothing proves that Cyrene resolved to sell grain to all the cities that had sent *sitōnai*: some of them may have met with a rebuff, or received an agreement for a quantity far below what they asked for. But it would be dangerous to build an argument *e silentio*. Several of the states that do not figure in the list may simply not have sent

<sup>25</sup> Hdt. 4.199, with Laronde 1996b: 524. For the fact that the several shipments are no proof of ships being sent over several years, see below p. 85.

*sitōnai* at all, either because they were self-sufficient and did not need to import grain (this is the explanation of A. Laronde for the absence of Messene and Sparta, two cities that had a rich agricultural potential), or because they had sent *sitōnai* to other grain producers, or because they were forbidden to import grain by Alexander as a punishment for their unfaithful attitude towards him. This explanation has been proposed for Sparta and Aetolia—although, admittedly, it is not compatible with the first one—or simply because they knew they would be barred and sent no *sitōnai* at all. As for Sparta and Messene, it seems however that, as A. Laronde maintains, their agricultural potential is not a sufficient explanation for their absence in the list.<sup>26</sup> For if it is easy to understand why Sparta could have been barred, a political explanation would not hold true for Messene, Sparta's permanent enemy in the Peloponnese and a city that obviously did not side with the Spartans in their fight against the Macedonians in and after 333.

A striking feature of the list is that those that received an agreement to export are mainly cities of central and above all southern Greece, with the adjunction of Epirus or Macedonia (Olympias and Kleopatra), some Thessalian cities and some of the Ionian Sea (see Fig. 4.2). On the coast of Asia Minor, Kos is the city furthest north that imported Cyrenean grain.<sup>27</sup> Samos, Chios, or Lesbos do not appear, and nor does any continental city. Does this mean that northern Greek cities in general did not need grain? Or does it suppose that their requests were turned down? That northern Greek cities did not need grain is quite unlikely; we would have to believe that the grain shortage was the consequence of a bad harvest, the unlikeliest hypothesis of all (see below). As at the time there was no discussion of the obligation to send grain to the 'Macedonian bloc' (Macedonia, Thessaly, and Epirus), one could guess that beyond political necessities the Cyreneans gave their preference to their traditional partners, to those cities that in the past had regularly bought grain on their market. Besides, in a kind of division of labour, the Cyreneans may have publicly announced that they would supply grain only to their traditional partners of southern Greece, leaving to Pontos the task of feeding northern Greece. It is unfortunate that we cannot answer this question.

Analysis of the list requires us to determine what belonged to long-term trade relations and what belonged to special circumstances. As we see in Figure 4.3, southern Greece (i.e. the Peloponnese, Athens, Crete, the Cyclades and Doric islands off the coast of Asia) together benefited from 55.1 per cent of the total amount of grain sent by Cyrene, while the 'Macedonian bloc' (mainly 'Olympias' and 'Kleopatra') received 31 per cent (see Fig. 4.3). But there is no doubt that before the Macedonians established their dominion in

<sup>26</sup> Laronde 1987a, *loc. cit.*

<sup>27</sup> For a *sitodeia* in Kos in the years around 280, Segre 1934 (with a new fragment to be published by D. Bosnakis, see Habicht 2007: 132).

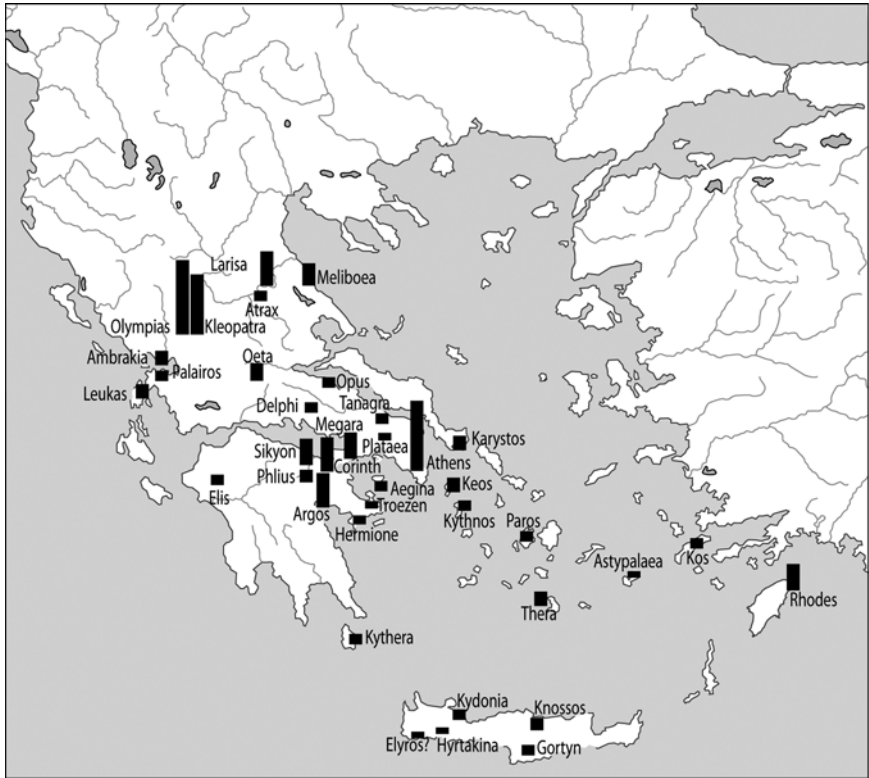


Fig. 4.2. Geographical distribution of the beneficiaries.

the 340s and 330s, the percentage of grain exported by Cyrene to southern Greece was higher. Another striking feature is the share of the Peloponnese as a whole, which is in fact only the share of northern Peloponnesian states: Corinth, Megara, Argos, and Sikyon imported large quantities, while Aegina, Phlius, Troezen, Hermione, Elis, and Kythera also imported some Cyrenean grain. This illustrates Herodotos' statement that in 480 Aeginetan ships crossed the Straits from the Black Sea bound for the Peloponnese: the northern Peloponnesian states experienced a permanent deficit in grain, which they could compensate only by distant imports.<sup>28</sup> This also justifies Aristophanes' irony on the price of grain at Megara during the Peloponnesian War,<sup>29</sup> as well as the Athenian strategy to strike the Peloponnesians by barring them from access to Sicilian grain in 427 BC.<sup>30</sup> The level of imports from Cyrene must have been unusually high during the grain shortage alluded to by our text. But

<sup>28</sup> Hdt. 7.147.

<sup>29</sup> Ar. *Ach.* 758–9.

<sup>30</sup> Thuc. 3.86.4–5.

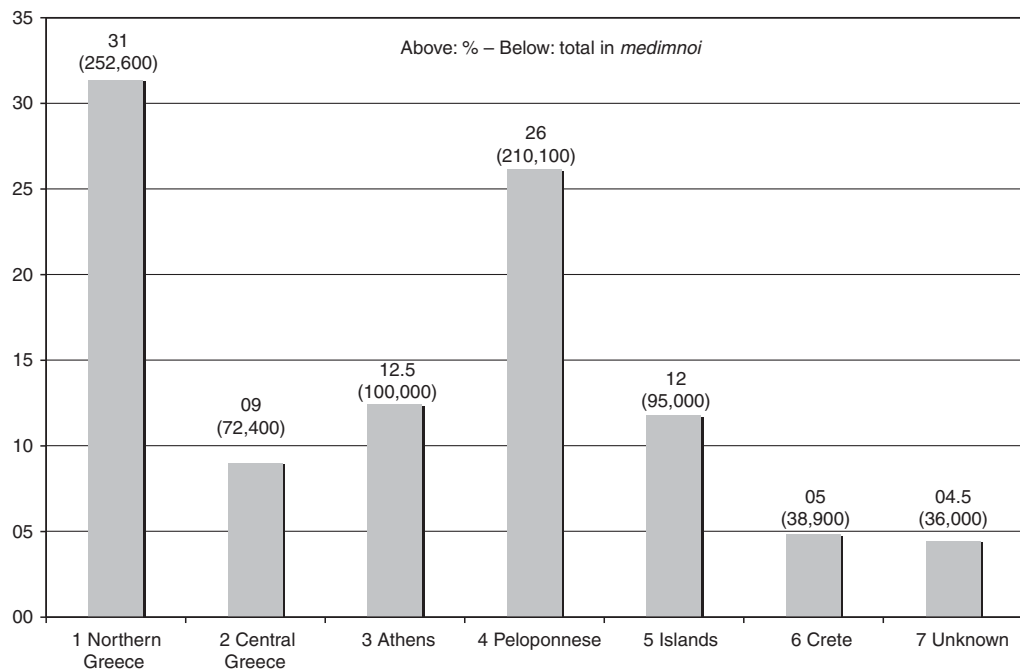


Fig. 4.3. The beneficiaries of Cyrenean grain: percentage by region of the amounts sent.

one may safely conclude that the distribution of these imports, especially for southern Greece, reveals their permanent dependence on imported grain.

The sharing out of grain between the different cities is one of the keys to the understanding of the list. Cyrene was certainly accustomed to receiving traders buying grain in order to transport it to this or that city as well as *sitōnai*, public commissioners, coming directly on behalf of their city. But this time the situation must have been different. A general *sitodeia* struck Greece and, confronted by what seems to have been a general disaster, many states must have sent their *sitōnai* abroad. The *sitōnai* went to Cyrene presumably because usually their cities imported grain from that region in normal years. But on this occasion they wanted more than usual, to compensate for a significant deficit. To think of poor crops in Greece as a whole is unlikely, as a diversity of precipitation in the several regions of the country seems always to have been the rule. The best explanation for this general famine is to consider that it was linked to the deficit of production in Egypt precisely during these years, as is well known by the manœuvres of Kleomenes of Naukratis. The famine alluded to by the text would thus have been either in 330/29 or 328/7.<sup>31</sup> The lack of Egyptian grain supply could suffice to create a deficit that struck all the south Aegean market. As a bad crop in Egypt was provoked by a low level of the Nile flood in the preceding summer, the Greek cities must have been informed as early as September or October of the deficit they would have to face the next year. All the same, the Cyrenean authorities must have been informed at an early date of the deficit that would strike Greece in the following spring. The Cyrenean grain was one of the first to come to market (normally alongside Egyptian grain), as the harvest took place earlier than in Greece and of course Pontos. The timing is late April in the coastal zone, mid-May on the middle plateau, and on the upper plateau the harvest is completed at the beginning of June. As underscored by A. Laronde, this is a good month before the harvest in Greece, and the gap is even larger with that of the Pontic region<sup>32</sup> Thus the *sitōnai* must have arrived in early or mid-spring.

As for grain, a commodity of first importance whose supply frequently fell short of demand, there is a significant parallel for conditions of export in the Bosporean kingdom. In the speech *Against Leptines* (20.31) Demosthenes stressed the privileges enjoyed there by the Athenians. Not only did the ships bound for Athens enjoy a tax exemption, but Leukon allowed them to load in priority, thus granting them a pre-emptive right: 'He proclaims that those bound for your port shall have priority of loading.'<sup>33</sup> The privilege had already been mentioned around 393–391 by the son of the Bosporean aristocrat

<sup>31</sup> See Bresson 2008: 208–10. There is no room here to investigate in detail the chronological issue. On the role of Kleomenes, see also below pp 83–4 with n. 45.

<sup>32</sup> Laronde 1996b: 525–6.

<sup>33</sup> Dem. 20.31: κηρύττειν πρώτους γεμίζεσθαι τοὺς ὡς ὑμᾶς πλέοντας.



Sopaios, when pleading in Athens to get back the sum he had deposited with the banker Pasion: 'You should also have in mind both Satyrus and my father, who have always favoured you before all the other Greeks and often in the past, when there was a grain shortage and they were sending away empty the ships of the other merchants, granted to you the right of export.'<sup>34</sup> Striking a political agreement with the exporting state to get the right to export was of first importance for guaranteeing access to grain. In a situation of grain shortage, it was vital to have the right to take away grain, while others would come home empty-handed. The role of the exporting state was to arbitrate between the several requests. In the fourth century, the Bosporan kingdom had deliberately favoured the Athenians, who benefited from the right to export from Bosporos, in a case that was obviously much more important than that of the other importing states, although we have no document similar to the list from Cyrene.<sup>35</sup> In the Cyrenean list, the Athenians are the first importers, but the difference with the other zones is far less significant than what we might expect from the parallel with Bosporos: their share was only 12.4 per cent of the total. Many first or second-rank cities, and even quite insignificant ones, received a right to the Cyrenean grain, and not only the usual 'big eaters'. In doing so, the Cyreneans had played the role of 'saviours of the Greeks', at least of many of them, probably accepting a loss of their financial income in exchange for a reputation as universal benefactors.

On the market, getting access to grain was thus first a matter of licence to export, but it was also a matter of money. If prices reached very high levels, only the well-to-do cities could afford to pay. Early Hellenistic Delos provides an interesting example of *sitōnai* (the word itself is not mentioned but the situation is clear), who in time of grain shortage could not take away from Delos the grain they expected, for want of money; only the intervention of a providential local benefactor prevented them from going back home without accomplishing their task.<sup>36</sup> Kleomenes' speculation on the Egyptian grain provides a good example of the attitude of a state that decided to maximize its income by raising the price of exports as much as possible.

Thus, there is no doubt that the Cyrenean list presupposes the existence of an allocation of the right to export, *exagōgē*, to the several states that it records.

<sup>34</sup> Isocrates, *Trap.* 17.57: Ἀξίον δὲ καὶ Σατύρου καὶ τοῦ πατρὸς ἐνθυμηθῆναι, οἱ πάντα τὸν χρόνον περὶ πλείστου τῶν Ἑλλήνων ὑμᾶς ποιοῦνται, καὶ πολλὰκις ἤδη διὰ σπάνιν σίτου τὰς τῶν ἄλλων ἐμπούρων ναῦς κενὰς ἐκπέμποντες ὑμῖν ἐξαγωγὴν ἐδόσαν.

<sup>35</sup> A list of the annual exports from Theodosia might have been set up in that city and might have been the source of Strabo 7.4.6. Cf. Bresson 2007: 66.

<sup>36</sup> IG XI 4, 1049, lines 6–9 (Migeotte 1984: 345–7, no. 117), see Reger: 118, and Duchêne 2001: 162–163: ἐν [τε] τῇ σπανιστείᾳ σίτου κα[τα]χθέντα ὑπὸ Δηλίω[ν] δις οἷς ὥφειλεν ἡ πόλις, | πα[ρ]αιτησάμενος τοὺς ἐν[ε]χυράσαντας, ἀπέσ[τ]ειλεν τῷ δήμῳ. On the meaning of the episode, see the comments in Bresson 2008: 186–8 (and the proposed identification of Karystos as the city that wanted to buy the grain).

Besides, there are three factors that invite further investigation, in order to arrive at a global reconstruction of the institutional process involved in the Cyrenean 'benefaction'. First, the list heading *ἔδωκε* cannot be taken to mean simply 'gave'. Alone, *διδόναι* seldom has the meaning of 'to give'. It usually means 'to transfer', 'to provide' or, in a financial context, 'to pay'. If one wanted to be explicit on the meaning of gift, one had to specify *διδόναι δωρεάν* ('to give as a gift').<sup>37</sup> Besides, a grain shortage does not imply a money shortage, and among the beneficiaries recorded were some who were immensely rich (Olympias for Macedonia), whilst others, like Athens or Rhodes, were well known for their financial means. Why should such wealthy partners have benefited from a huge gift from the Cyreneans? In the third place, even if the city of Cyrene had decided to make a gift of 805,000 *medimnoi* of grain, who would have paid for it? Either the Cyrenean treasury should have paid the grain producers an amount equal at least to several hundred talents, or the individual Cyrenean producers should have given their grain to the foreign carriers coming to Cyrene. They would have been very generous people, indeed, but there is no chance that this was the process that actually took place.

## EXPORTS AND STATE INTERVENTIONS

From an institutional viewpoint, the text raises three main points. The first one concerns the meaning of the heading. Obviously, Cyrene had delivered export licenses. But if the issue had been only an allocation of right to export (*exagōgē*) to the several beneficiaries, one would have expected to read *σίτου ἐξαγωγὰν ἔδωκε ἡ πόλις*, not *σίτον ἔδωκε ἡ πόλις*. But what does the latter formulation mean exactly? Should we consider that there was an equation between 'the citizens' and 'the city', *viz.* did the citizens sell the grain and the state organize the distribution? Or does this mean that the city directly sold the grain after sharing out the grain between the several foreign states that requested it?

A second point is the question of quantity. The amount requested by the Greek states must have been larger than usual. Also, if the Cyreneans were proud to help the Greeks, it means that the total reached on that occasion was higher than the usual level of export. Was the market mechanism, that is, the perspective of profit, a sufficient incentive to grain producers to send their grain for export? Or did a state mobilization take place to help the Greek states suffering from grain shortage?

<sup>37</sup> Cf RO 491, for another parallel; *ibid.* no. 64, lines 20–1 (many others could be adduced).

A third point is that of price. As already mentioned, giving a right to export would have been meaningless if the price of grain had reached levels at which only the richest states could have afforded to buy. Should we thus think of a form of price control?

As for the meaning of the heading, several of the financial stratagems recorded by Ps-Aristotle (*Oec.* 2.17 1348b–1349a) provide suggestive information on the process that must have been used by the Cyreneans. This is the case with the cities of Selymbria, Klazomenai, Mende, and Lampsakos and with the market operations of Kleomenes of Naukratis. The first one thus concerns the city of Selymbria, in Propontis, and the episode must have taken place around 360 BC:

Σηλυβριανοὶ δὲ δεηθέντες χρημάτων, νόμου ὄντος αὐτοῖς σίτου μὴ ἐξαγωγὴν <εἶναι>, [ἐν] λιμοῦ γενομένου, ἐκείνοις δὲ ὑπάρχοντος σίτου παλαιοῦ, ἐψηφίσαντο τῇ πόλει παραδοῦναι τοὺς ιδιώτας τὸν σίτον τῆς τεταγμένης τιμῆς, ὑπολειπόμενον ἕκαστον (1349a.) ἐνιαυτοῦ τροφήν· εἴτα ἐξαγωγὴν ἔδωκαν τῷ βουλομένῳ, τάξαντες τιμὴν ἣν ἑδόκει καλῶς ἔχειν αὐτοῖς.

The Selymbrians happened to be in need of money. As they had a law that forbade them the export of grain because a grain shortage had occurred (before), but as they had old grain, the city decreed that individuals should hand over this grain at a fixed price, everyone keeping a one-year provision. Then they gave the right to export to everyone who asked for it, after fixing a price that seemed best to them.

The text needs a preliminary comment. There has been a debate among scholars on the meaning of the beginning of the passage. For some, *λιμοῦ γενομένου* must be linked to the initial statement: the law prohibiting export should be seen as a consequence of a grain shortage that had taken place in the past.<sup>38</sup> For others, *λιμοῦ γενομένου* should be linked to the following sentence: there would have been a situation of general grain shortage, but that would not have struck Selymbria.<sup>39</sup> But the latter explanation cannot be accepted. One might wonder why there should have been a ban on export in Selymbria precisely at a time (a situation of general grain shortage) when the city would have been able to make a large profit. But a philological analysis leaves no doubt that only the first solution can be accepted. The second *δὲ* (*ἐκείνοις δὲ*) introduces a break and *λιμοῦ γενομένου* cannot be linked to the following sentence. Besides, a late third-century inscription of Miletus, which has at the end of a clause a genitive absolute with causal value, provides an excellent parallel to the grammatical construction of our text.<sup>40</sup> Thus, it is clear that is

<sup>38</sup> Garnsey 1988.

<sup>39</sup> Vélissaropoulos 1980: 197 n. 157, and Descat 1993: 150 and n. 20.

<sup>40</sup> *Delphinion*, 147, lines 3–8 (with *Milet* VI.1, 180–2 and German translation by P. Herrmann): ὅπως τὰ ἐνλείποντα ἐν τῷ ἐνεστώτι ἐνιαυτῷ πορισθῇ δυνατῶς καὶ συμφερόντως τῷ δήμῳ, μήτε εἰσφορὰς διὰ ταῦτα γενομένης ὑπὸ μηθενὸς μήτε τῶμ μισθοφόρων ἀφαιρέσεως διὰ

not a difference between the high price of grain on the international market (because of lack of grain) and their local price that would have motivated the Selymbrians to invent this trick to export. The correct explanation is different. The starting point of the operation was their need for money. A *sitodeia* had led the Selymbrians to pass a law prohibiting grain exports. It is easy to find parallels for this law; for example, the prohibition of grain exports enacted by Solon in Athens or a fifth-century law of Teos.<sup>41</sup> This law could not be suppressed and they could only bypass it. The solution came with the intervention of the state. The city bought old grain, that is, grain that could neither be consumed nor exported the previous year, as the law forbade its export, and had to be kept in reserve. The city decreed that individuals had to sell this old grain to the city at the officially fixed price (τῆς τεταγμένης τιμῆς).<sup>42</sup> Then the city itself would grant a right of export to anyone who would like to export, after fixing a price of resale, presumably superior to the price at which individuals had had to sell their grain: the difference between the two prices benefited the city and provided the way to get the money it needed.

One may wonder why the Selymbrians could consider they had not broken their law, as in the end they exported grain. The aim of the law was to prevent speculation and to make sure that the Selymbrians would keep their grain for themselves: a rich farmer would not be able to export his production even if prices were higher on the international market. This was a traditional ‘closed market attitude’. But by selling old grain the risk was minimal. Besides this, there was another trick: the law prescribed that the Selymbrians would not have the right to export their grain: αὐτοῖς σίτου μὴ ἐξαγωγῆν <εἶναι>. But what the individuals (ιδιώται) could not do, the city (ἡ πόλις) could decide to perform. Of course, the farmers were happy to sell their grain at the officially fixed price of the Selymbrian market: this was for them an unexpected bonanza, all the more so as the operation did not reduce the price of the other grain sold on the local market. As for the polis, it found itself adopting the position of a monopoly for export and could fix an appropriate price (as high as possible as regards international market conditions and the second-rank quality of the grain they sold). It could give to others (presumably foreign traders) the right to export. The Selymbrians had not individually exported their grain. Thus the law had not officially been broken (which meant there would be no social tension within the town). But the state had made the money it needed to meet the expense it had to make. If, on the contrary, the city had temporarily lifted the ban on exports, the consequence

τὸ πεπονηκέναι τὰς τε κοινὰς καὶ τὰς ἰδίαις ἐκάστου προσ|όδους γεγενημένης ἐπὶ πλείονα ἔτη κατὰ τὴν χώραν ἀφορίας, ἐψηφίσ|θαι Μιλησίους· κτλ.

<sup>41</sup> Solon: Plut. *Solon* 24.1, with the comments of Bresson 2008: 200–3; Teos: ML no. 30, c.470 BC.

<sup>42</sup> On this notion, Bresson 2000: 183–206.

would have been a strong demand from outside. Individual farmers would have been able to make a good profit, but the consequence would have been an increase in grain prices on the internal market. Consumers would have suffered from the law, and the city itself would have made only the small profit linked to the rise of the tax yield on exports (perhaps, as in other cities, the yield of the fiftieth, the *pentēkostē*). Market fragmentation and separation between internal and external markets allowed the city to play down social tensions among its members and allowed the state itself, not the individuals, to make the profit it wanted.

A similar process can be seen in another stratagem mentioned by Ps-Aristotle (*Oec.* 2.16a, 1348b). This time, it concerns Klazomenai, also around 360 BC:

*Κλαζομένιοι δ' ἐν σιτοδείᾳ ὄντες χρημάτων τε ἀπορῶντες ἐψηφίσαντο παρ' οἷς ἔλαιόν ἐστι τῶν ἰδιωτῶν, δανείσαι τῇ πόλει ἐπὶ τόκῳ· γίνεται δὲ πολὺς οὗτος ὁ καρπὸς ἐν τῇ χώρᾳ αὐτῶν. Δανεισάντων δὲ μισθωσάμενοι πλοῖα ἀπέστειλαν εἰς τὰ ἐμπόρια, ὅθεν αὐτοῖς ἦκε σῖτος, ὑποθήκης γενομένης τῆς τοῦ ἐλαίου τιμῆς.*

The Klazomenians suffered from a grain shortage and lacked money. Thus they decreed that whatever oil belonged to individuals among them, had to be lent to the city at interest. This crop is abundant in their territory. Having borrowed that oil, they hired ships and despatched them to the trade markets from where (usually) came their grain, after having reserved a fund with the price of oil.

The starting point is the same as with Selymbria: the necessity for the state to make money, this time to buy grain, as the initiative of individuals on the market was suspected not to be sufficient to make sure that the city would have enough grain. Thus the city obviously decided to send *sitōnai* to the grain markets where the Klazomenians were used to buying their grain. What was original was the fact that the *sitōnai* would not carry money, as was common practice, but with goods to be sold there: the famous Klazomenian oil. Indeed, oil was the most famous product of Klazomenai, as is proved both by amphora production and by oil production sites excavated on the spot.<sup>43</sup> But the main point is the intervention of the city (ἡ πόλις), which had borrowed oil from individual producers (*ιδιώται*). Again, exceptional circumstances had led to the intervention of the state that substituted itself for the usual market operators.

The same opposition between the city and individuals can be observed in another case reported by Ps-Aristotle (*Oec.* 2.21b, 1350a), this time concerning the city of Mende (first half of the fourth century):

<sup>43</sup> Ersoy 2000, 2003, and Koparal and İplikçi 2004.

*Πολεμοῦντες <δὲ> πρὸς Ὀλυνθίους καὶ δεόμενοι χρημάτων, ὄντων αὐτοῖς ἀνδραπόδων, ἐψηφίσαντο καταλειπομένου ἐνὶ ἐκástῳ θήλεος καὶ ἄρρενος τὰ ἄλλα ἀποδόσθαι τῇ πόλει ὥς ἐκδανείσαι τοὺς ιδιώτας χρήματα.*

At war against the Olynthians and in need of money, as they had slaves, (the Mendeans) decreed that while leaving to everyone a female and male slave, they would hand over to the city all their slaves but two, one male and one female per owner: by doing so, individuals would lend money to the city.<sup>44</sup>

The difference made between individuals and the city also appears in another stratagem recorded by Ps-Aristotle (*Oec.* 2.7, 1346a–1347b: probably from 409 BC), this time concerning the people of Lampsakos. The Lampsakenes decided to profit from the presence of an important fleet of triremes in their port. Flour was sold at a price of six drachms instead of four, the *chous* of oil at four drachms three obols instead of three, and the same held true for wine and other products. The 50 per cent price rise targeted only foreign sailors. Again Ps-Aristotle stresses that while the individual trader received the ordinary price, the city benefited from the surcharge:

*Τὴν μὲν οὖν (1347b) ἀρχαίαν τιμὴν ἐλάμβανεν ὁ ιδιώτης, τὸ δὲ πλεόν ἡ πόλις, καὶ εὐπόρησε χρημάτων.*

Thus individuals received the original price while the city received the difference and made much money.

The stratagems recorded by Ps-Aristotle do not reflect the usual procedures, where the state did not intervene directly in buying or selling on the market. These options operated in exceptional circumstances, where state authorities had to think up new solutions to face unexpected difficulties. These stratagems must have taken place at the end of the fifth or in the first half of the fourth century (for Mende necessarily before 348 and the destruction of Olynthos). Their memory has been duly recorded, as the Ps-Aristotelian text illustrates, and the three of them reveal the logic of state intervention. A fifth parallel should be adduced, although it seems a strange one, as it seems to show an attitude opposite to that of Cyrene. When a grain shortage took place in Egypt

<sup>44</sup> There has been a debate on the meaning of Aristotle's explanation, for there seems to be a contradiction here between a sale and a loan. The verb *ἀποδόσθαι* usually means 'to sell'. Some, like B.A. Van Groningen (1933: 144–6), have proposed to amend the text and to replace *τῇ πόλει* by *τῇ πόλει*: the city would have sold the slaves. L. Migeotte (1984: 120–1, no. 37) has accepted *τῇ πόλει*. Considering that the citizens could not have sold their slaves to the city, he proposed that the citizen-body would have sold them 'for the benefit of the city', loosely alluding to the administrative procedure of selling slaves abroad. However the key point is the distinction between the citizen-body and the state. The slaves were sold to the state by individual vendors. But the city could not pay them immediately: it would pay them back when these slaves would have been sold on foreign markets. In between, the sellers made a loan to the city.

at the beginning of the 320s, the governor, Kleomenes, decided to take advantage of the situation (Ps-Arist. *Oec.* 2.33a, 1352a).<sup>45</sup> After banning the export of grain, he allowed only a small export, which nevertheless accrued a high tax, enabling Kleomenes to make a great deal of money. Besides (ibid. 2.33e, 1352b), in the same year or in another one, but also in a period of grain shortage, he bought grain both from the producers, below the market price, and from grain dealers at the normal export price, thereby benefiting from a monopoly situation. He bought from the grain dealers what little grain was on the market. The paradox was that by so doing, he was able to make a significant profit from the grain shortage. Separating internal and international markets and establishing his own monopoly on export, he could exact extraordinarily high prices from his foreign partners: the difference between the local and the international market prices went to his own pocket. This was basically the same attitude as that of the Selymbrians, but in Kleomenes' case it was motivated by a cynical resolution to make the best of the grain shortage.

Taking into account these parallels, it is beyond doubt that the heading at the top of the Cyrenean list that mentions 'the city (ἡ πόλις) has provided grain' should be taken at face value: not only had the Cyrenean state allocated grain to the several communities mentioned in the list, but also it had directly sold grain to the *sitōnai* or other traders sent by the several Greek states.<sup>46</sup> If so, one must admit that, behaving like the Selymbrians, the city had passed a decree ordering that all grain that was not necessary to the Cyreneans, after a sufficient quantity had been kept in reserve, was to be sold to the city. If the Cyreneans wanted to help the Greeks of the motherland beyond the sea, two conditions had to be fulfilled. First, if they wanted to provide significant help, they had to ship the largest possible quantity of grain: state intervention made possible what private initiative would not have achieved. Second, they had to allocate that grain, not at the highest possible price (which would have eliminated the communities that would be unable to pay), but at a reasonable one. But the Cyreneans also had to take care of their own interests. They had to make sure that an excessive export would not damage their own local market, as the unusually high foreign demand might disrupt it by provoking a huge price rise or even a grain shortage by encouraging excessive exports. Besides, the state could expect to make a good profit from export, although not an illegitimate one, as the export price would be kept at a reasonably high level. Beyond a seemingly common monopolistic tendency, their behaviour was in absolute contrast with that of Kleomenes. This fully justified dedicating an inscription to commemorate their benefaction.

<sup>45</sup> For Kleomenes, see Le Rider 1997.

<sup>46</sup> For the clear institutional meaning of the word *πόλις* in the dossier of the Cyrenean inscriptions themselves, Dobias-Lalou 1999: 141–3.

## THE GRAIN PRODUCTION OF CYRENE

Of the main points of debate on the Cyrenean list, the quantity issue is of critical importance. Had the Cyreneans sent the grain mentioned over one single year? Or does it represent a delivery over a non-determined time-span of two years, three years, or more? It seems that there is a consensus in favour of the second solution.<sup>47</sup> Yet, one can demonstrate that the delivery took place during one single year. The reasons are of different orders: the structure of the list, the dating formula at the heading of the list, and overall plausibility in the quantities mentioned in the list.

Rhodes and Osborne consider that the separate exports for some of the clients of Cyrene are an argument in favour of an act of generosity that would have taken place over several years. But it is easy to see that most of the second amounts are smaller, often much smaller than the first one.<sup>48</sup> Should we assume that in the second year they needed so little grain? Besides, a large majority of the cities that benefited from the distribution are recorded only once. The second mention is not an argument in favour of a distribution over more than one year, and the preferred solution is that of a second grant in the same year. The heading begins with a reference to a priest: [ἱαρε]ὺς Σωσίας Κα[λλιὰ]δα.

In Cyrene, after the fall of the last Battiad king Arkesilas IV in 439, the eponym was the priest of Apollo. The post was renewed on an annual basis. The accounts of the *damiourgoi*, which necessarily mention agricultural and religious activities that cannot extend over more than one year, are registered under the authority of a priest commonly considered to be the eponym of the city.<sup>49</sup> The 'Constitution of Cyrene' established by Ptolemy I prescribes that 'the priest of Apollo should be chosen among the elders who have not yet been priests and are over fifty years old' (τοὺς [δὲ ἱα]ρῆας τοῦ Ἀπόλλωνος αἰρεῖσθων ἐκ τῶν γερόνων τῶν μὴ ἱα[ριτ]ευκότων μὴ νεωτέρους πεντήκοντα ἐτῶν).<sup>50</sup> Pace Sherck, nothing proves that the clause aimed at opening access to the priesthood of Apollo to newcomers.<sup>51</sup> Forbidding iteration and stipulating an age over fifty may well have been found in the old Cyrenean constitution. On this point, Ptolemy's own provisions may have simply reproduced the ancient regulation. The clause is clearly inspired by a conservative attitude and nothing proves that it aimed at introducing a system that would have been more open. Thus it has to be considered that before as after Ptolemy's reform the priest of Apollo was chosen on an annual basis.<sup>52</sup> The formulation of the heading has long remained isolated

<sup>47</sup> See Laronde 1987a: 30–4; RO 490.

<sup>48</sup> See above, p.73 for this detail and n. 25 for the issue of the periodicity of harvests in Cyrene.

<sup>49</sup> See *ex. gr.* SEG IX, 11–15, with Chamoux 1988.

<sup>50</sup> SEG IX, no. 1, lines 23–5.

<sup>51</sup> Sherck 1992: 271.

<sup>52</sup> On priests of Apollo in the Roman period, Laronde 1987b.



in Cyrenean epigraphy. But recently the publication of a list of subscriptions has provided an illuminating parallel. Its heading begins thus: *ἱαρεὺς Νικόβ[ωλος] Ἰάσονος. | ὅσσοι ἐπέδωκα[ν χρήμ]ατα ταῖ πόλει*, ‘Priest Nikobolos son of Iason. A list of those who have voluntarily contributed money to the city’.<sup>53</sup> We have first the name of the priest, then the indication of the nature of a list. This text must be dated around 280 bc, about half a century after the ‘grain stele’. It shows a regular formulation and furthermore indicates that the latter was not unique, at least in the matter of formulation. A list of contributors for a voluntary gift (*epidosis*) is banal. But the procedure is well known. Usually, it was during one assembly that people had their name inscribed for a contribution.<sup>54</sup> A procedure of *epidosis* covering several years would be unparalleled. There is no hint in the formulation of the heading that the sending of grain took place in more than one year.

But of course what has seemed to be the most important obstacle to admitting that the operation might have covered one single year is the seemingly enormous quantity of grain sent by Cyrene. This conclusion should however be questioned. The starting point should be the issue of the standard of the *medimnoi* mentioned. Was the *medimnos* alluded to the Attic one at 52.416 litres, or the Aeginetic-Lakonian one, which is roughly 50 per cent larger?<sup>55</sup> True, on this point no certitude can be reached. At least it is possible to show that the hypothesis of the Attic *medimnos* not only cannot be excluded but should even be favoured. Usually, the weight standards of Greek cities were reflected in their coinage standards, as the latter were (originally) directly based on the weight standards. Thus the coin standard may give a hint, if an imperfect one, to help determine which weight standards were actually used. For a long period, Cyrene struck on a standard of its own, the so-called ‘Asiatic’ standard, with a drachm c.3.8 g. An originality of Cyrene is that the city struck an abundant gold coinage, originally on the ‘Asiatic’ standard, but that found an easy correspondence with the Attic standard with a gold stater of 8.60 g. A silver Attic didrachm of 8.60 g was also struck, worth one tenth of the gold stater. The chronology of these coins is not yet fully precise but they are contemporary with the monetary developments that took place under Philip II and Alexander.<sup>56</sup> Indeed, while Peloponnesian and Cretan cities may together have played a more significant role in its foreign commerce, the grain stele shows that Athens was Cyrene’s first commercial partner, and would probably have absorbed a more important proportion of its grain in ordinary years in the fourth century. The influence of its weight

<sup>53</sup> Dobias-Lalou 1998.

<sup>54</sup> Migeotte 1992: 310–12.

<sup>55</sup> For this value of the the Attic *medimnos*, Stroud 1998: 55.

<sup>56</sup> On these issues, Laronde 1987a: 233–40.

standard reached the Black Sea and Egypt.<sup>57</sup> Indeed, Cyrene *might* have used a traditional Lakonian or unknown local standard, but all in all the Attic hypothesis, which had already been preferred by Oliverio or Laronde (and ever since by most commentators) is certainly the most attractive. It is on that base that the quantities of grain alluded to by the stele will now be analysed.

The 805,000 *medimnoi* of the list represent more than twice the production of Attika in 329/328 BC (c.367,000 *medimnoi*).<sup>58</sup> This is also more than the whole production of the Athenian overseas possessions (in fact mainly of Lemnos and Imbros), which at the same date produced c.460,000 *medimnoi*. At first sight, this seems to be a strong argument against admitting that 805,000 *medimnoi* could be exported by Cyrene in a single year. But the issue needs further inquiry. This figure can be compared with the grain production of Cyrenaica before the development of Italian colonization. In 1926, Cyrenaica produced 465,000 quintals of barley and 43,858 quintals of wheat, for a total of 508,858 quintals.<sup>59</sup> Closer attention should be paid to the figures. Thanks to the Attic grain tax law of 374/3, we know that at Athens the standard weight of one Attic *medimnos* of barley was *ca.* 27 kg, and that of wheat of c.31.5 kg.<sup>60</sup> These figures can reasonably be used for evaluating the grain production of Cyrene. Admitting that the proportion of wheat and barley was the same in Antiquity as it was before the Italian colonization, namely the weighted mean of the *medimnos* of *sitos* would be  $([9 \times 31.5] + [91 \times 27]) / 100 = (283.5 + 2457) / 100 = 27.40$  kg. Even if that proportion was a bit different, it would not modify the final result in any significant way and we can use that figure with confidence. Thus, the weight of 805,000 Attic *medimnoi* would be 220,570 quintals. This would represent a proportion of 43.3 per cent of the grain production of 1926 (508,858 quintals). If some grain (at most 10 per cent) produced in western Cyrenaica should be deducted from the gross total, as this territory did not belong to ancient Cyrene, the proportion would be 48 per cent of the total of 457,972 quintals. Thus, Cyrene's export represents only about one half of the production of 1926, not the whole production of that year.

Nevertheless, it should be perfectly clear that a proportion of c.50 per cent of exports is not credible, given the productivity of ancient agriculture. But the figure of 1926 must be questioned. Modern figures of agricultural production and yields offer highly valuable information for estimating ancient productions. But these statistics must always be used with care. They do not give us photographs of an unchanging lifestyle, but only a snapshot of an ever-moving

<sup>57</sup> Bresson 2008: 218.

<sup>58</sup> For the figure of the production of Attika in 329/8, see *IG II<sup>2</sup>* 1672, with Bresson 2008: 203–7.

<sup>59</sup> E. De Agostini in Bertarelli 1929: 432.

<sup>60</sup> Stroud 1998: 55.

world. As for Cyrenaica, there should be no misunderstanding of the meaning of 'longue durée'. First it should be clear that there has been, in the course of time, a fundamental difference between two modes of exploitation of this territory. The first one was that of the pastoral Libyan tribes, which existed before the Greek colonisation. The social life of the native ('Libyan') tribes of northern Africa has been famously described by Herodotus, in Book Four of his *Histories*. For him, east of the Gulf of Gabes (Lake Tritonis, whatever this lake was), all the Libyan tribes were nomadic. West of the gulf they were sedentary. These he famously qualifies as 'eaters of flesh and drinkers of milk'. This classification has been analysed by B.D. Shaw, who has convincingly explained this binary opposition between nomads and sedentary communities as a mode of presentation that reflected the categories of Herodotus, and beyond him of ordinary Greeks.<sup>61</sup> We have here the ideology of a people of farmers, who considered nomadic herdsmen as a danger for their own way of life. This justifies their disdain for nomads, considered as a primitive and underdeveloped form of human culture. But the view of nomads living exclusively from the products of their flocks is a myth. Nomads always entertained a complex relationship with sedentary, albeit semi-sedentary populations, or were themselves part-time grain producers (as was the case in modern times for Bedouins of Cyrenaica). And even if the local people of today's Tunisia were more oriented towards agriculture, their way of life was not deeply different from that of the 'eastern Libyans'. Thus, when describing Marius' campaign in Numidia, Sallust notes that his troops suffered from lack of grain and then provides this interesting comment as one of the explanations of his favourite general's difficulties: 'For the Numidians take more interest in animal husbandry than in ploughing'.<sup>62</sup> The definition also applies to pre-Greek Cyrenaica.

Greek colonization did not mark the beginning of agriculture in Cyrenaica. But it was the beginning of a new development, organized towards the systematic exploitation of land. Before that colonization, the aim of the Libyans was to produce for the basic needs of a nomadic or semi-nomadic population. With the Greek conquest things changed significantly; agriculture became more important than herding. The aim now was to produce as much grain as possible, to cover the needs of a local population that, with the implantation of towns, was far denser than before, but also to produce a large quantity of grain that would be exported to foreign markets, a notion that was probably absent before the Greeks. Cyrene was part of a wide Mediterranean network. While contacts with the steppe or the oases peoples were not abandoned, contacts with countries beyond the sea now played a

<sup>61</sup> Shaw 1982–3. See Peyras and Troussset 1988 for Lake Tritonis.

<sup>62</sup> Sallust, *Jug.* 90: *quippe etiam frumenti inopia temptabatur, quia Numidae pabulo pecoris magis quam arvo student.*

major part in all aspects of Cyrenean life. The tremendous architectural development of the town of Cyrene in the Classical and Hellenistic period testifies to this new orientation and prosperity.

The tide turned at the end of Antiquity. There has been a large debate on the issue, both concerning the Arab conquest itself in the seventh century, and later the invasions of the Hilalians (or 'second Arab conquest') in the eleventh century.<sup>63</sup> But there should be no misunderstanding of the issue. Continuity and 'longue durée' should not conceal structural evolutions. It should not be doubted that the Arab conquest caused a fundamental reorientation towards an economy where nomads and sheep or goat breeding again played a dominant role. As previously emphasized, this by no means involved the disappearance of agriculture. But agriculture was no longer socially dominant, either in the organization of rural space, or in the values shared by the population. Large tracts of land were used as grazing land and the nomadic or semi-nomadic tribes provided the framework of social organization. This does not preclude a perfect geographical integration between animal husbandry and agriculture. The Bedouin and their flocks remained in the north of Cyrenaica until December, after ploughing. Then they moved to the southern steppe, and moved back northwards in May after the harvest. Barley was produced mainly for animal feed, while wheat was destined for human consumption. The density of the population was low, as is usual in societies dominated by nomads.<sup>64</sup> Clearly, a pastoral economy leaves comparatively little cereal output for consumption in the towns, and even less for export. This lack of integration between town and country was probably one of the most significant factors inhibiting 'economic take-off'. Yet, even in such a situation, in good years there could be some sizeable export towards foreign markets. Though underscoring the negative impact of the growing control of European powers on the African hinterland at the end of the nineteenth century, J. Wright shows that the Libyan economy was not devoid of contact with the Mediterranean world, at least in good years:<sup>65</sup>

So the country fell back on its only other resources of agriculture and stockraising, both of them hostage to the notoriously fickle climate. In good years—about four seasons out of ten—food surpluses were exported; in bad years—one or two each decade—only imports prevented mass starvation. In a good year such as 1850, according to the statistics of the French consul, Libya exported 212,700 hectolitres of cereals, 1,375 tons of olive oil, 11,787 head of cattle and over 400,000 kilos of Cyrenaican butter. Cattle—sometimes up to 40,000 a year—were exported on the

<sup>63</sup> Poncet (1967) minimizes the impact of the Hilalian invasion, while Cahen (1968 and 1973) tries to situate it in the wider perspective of evolution to herding of the societies of northern Africa and the Middle East. See also Horden and Purcell 69.

<sup>64</sup> Evans-Pritchard 1949: 33–6; Peters 1990: 130–1.

<sup>65</sup> Wright 1982: 22.

hoof to Egypt, and to Malta for the victualling of the Royal Navy, while Cyrenaican wool was sold to Italy.

The 212,700 hectolitres exported in 1850 represent roughly 400,000 Attic *medimnoi*, or one half of the Cyrenean export of the beginning of the 320s BC. As for the statistics of production of 1926, we should consider that they provide a lower threshold and that the actual level of production in Antiquity was sensibly beyond that level. In his description of the situation of rural exploitation in the 1929 edition of the *Guida d'Italia del Touring Club italiano*, where figures for the grain production of 1926 are provided, E. De Agostini stressed the low level of development of agriculture and the 'major role' of nomadic husbandry. With a prejudice characteristic of the European colonial period, he also commented on the 'lethargy' of the native population.<sup>66</sup> But nevertheless his comment is also revealing of an agricultural system where herding dominated ploughing. Besides, presenting the exploitation of the territory of Taucheira/Tocra since Antiquity, A. Laronde has underscored the difficult conditions prevailing in the 1920s, with a small proportion of the land used for agriculture, production falling in some years almost to zero because of poor rainfall and insecurity.<sup>67</sup> This period saw fierce Italian campaigns against the Libyans. The great Sanusi War began in 1923 and ended only in 1931 with the capture and execution of Omar al-Mukhtar.<sup>68</sup> These circumstances did not favour a high level of production. In other words, there is no argument that obliges us to accept that the level of grain production in Antiquity was not largely superior to that of modern Bedouin Libya.

Global estimates are always questionable. But the issue is to make a reasonable guess at what this level may have been. Horden and Purcell estimated that the main agricultural potential of Cyrenaica was 2,000 km<sup>2</sup> of good land, with an undefined surface of marginal land. A reasonable estimate is that about 90 per cent of this surface, or 1,800 km<sup>2</sup>, belonged to Cyrene and could be under the plough. This land is in good part exceptionally rich, with layers of *terra rossa* up to more than one metre deep in the most fertile zones. In modern Attica, as was probably the case in Antiquity, the mean productivity ranged between c.6 to 8 quintals per hectare, depending on whether it was planted with wheat or barley.<sup>69</sup> These low figures can easily be justified by the poverty of the soil and the low level of precipitation (around 400 mm a year). As for Libya, more precise figures can be gained for traditional Bedouin agriculture. In 1922/3, with normally good rainfall and good security conditions, 3,720 hectares were planted with grain in Tocra (ancient Taucheira): 1,625 hectares

<sup>66</sup> In Bertarelli 1929: 430–2.

<sup>67</sup> Laronde 1994.

<sup>68</sup> Evans-Pritchard 1949: 157–90. Large colonization began only after the end of the Sanusi War, see Segrè 1975: 79–119.

<sup>69</sup> Erdkamp 2005: 43.

with barley, with a production of 15,284 quintals, a yield of 9.41 quintals / hectare; for wheat, it was 1,280 hectares, with a production of 9,724 quintals, a yield of 7.60 quintals / hectare. 1923/4 was a year of poor rainfall and insecurity and only 85 hectares were planted with grain.<sup>70</sup> But Tocra (of which A. Laronde estimates the total surface useful to agriculture to 250 km<sup>2</sup>) is a region where the rainfall is lower than on the plateaux and is far from having the most productive lands of Cyrenaica. Assuming a cycle of two-year fallow and the relatively low figure of 9 quintals per hectare in good years, we reach the reasonable estimate of 810,000 quintals for the territory of Cyrene, as compared to the 508,858 quintals of 1926 for Cyrenaica, a figure that is not even double the amount.

Now the issue is to determine the proportion of an actual crop that could be exported. Estimates have been proposed for Roman Sicily, based on actual figures from medieval and modern parallels for the island. In the Middle Ages and in the early modern period, the annual mean proportion of export rose over time from 2–3 per cent in the late thirteenth century to 15–17 per cent at the end of the fifteenth century. For this reason, a mean of 17 per cent has been proposed for the export of Roman Sicily (covering both the two tenths imposed by Roman authorities and private, ‘free’ exports).<sup>71</sup> The Medieval or early modern Sicilian figures are mean values and some years could be above or below these figures. An exceptional proportion of 33 per cent was extorted in 1392 when enemies captured the island. If indeed the production of ancient Cyrene could reach 810,000 quintals in good years, the 220,570 quintals of the ‘grain stele’ would represent a proportion of 27 per cent, or over one-fourth of the production. We should admit a proportion for export of about 25 per cent. This is still a high level that requires more comment.

First, exporting one-fourth of the local production was not a normal situation. To reach that proportion, the Cyreneans had to enjoy a very good crop and, even so, to make an unusual effort, which would justify such dedication. If they behaved like the Selymbrians, the Cyreneans may have forbidden the farmers to keep more than one-year’s worth of provisions. Besides, they must have organized a system of compulsory sale to the state. What is more, some Cyreneans may also have sold their old grain to supplement the product of the year and kept adequate reserves for themselves, just as the Selymbrians had done. This means that we should not assume that in other good years the level of export reached 805,000 *medimnoi*. It must rather have been between 15 and 20 per cent of the crop (of course if it was a good one: in bad years, export must have been minimal or absent). Finally, the 805,000 *medimnoi* of Cyrene should be compared not with the production of Attika, but with the 400,000 *medimnoi* exported to Athens from the Bosporan kingdom alone in the

<sup>70</sup> Laronde 1994: 27.

<sup>71</sup> Erdkamp 2005: 217–18.

mid-fourth century, while we know that this state exported to several other Aegean cities (thus possibly 100,000 *medimnoi* to Mytilene only), and without any doubt to a series of other cities for a gross total that might have equalled or exceeded the export to Athens.<sup>72</sup> At least, we can see that this level of export is not out of proportion with what can be observed in the Pontic region.

## THE GLORY OF THE CITY

Sending this grain was the pride of the Cyreneans, which they claimed before the Greeks by erecting a stele probably in their sanctuary of Apollo, the highest god of the city. This list echoes other famous catalogues, such as the list of troops that Xerxes launched against Greece in 481 and that of the cities that had preserved the freedom of the Greeks, or the Athenian tribute lists in the fifth century, or Hannibal's dedication at the sanctuary of Hera at Cape Lacinium in 203, or the list of troops and peoples he had gathered in his campaign against Rome in Italy (mentioned by Polybius).<sup>73</sup> These lists commemorated a *thauma*, a human deed whose exceptional magnitude destined it to be preserved eternally in human memory. But the best parallel is surely the archetype of all Greek catalogues: Homer's 'Catalogue of ships' recorded in Book II of the *Iliad*, 494–759. For what it is worth, the southern Greek character of the 'Catalogue of ships' should be stressed, extending from the Ionian Islands and Elis to Rhodes—a frame paralleled in the Cyrenean 'grain stele'. The most prestigious figures or cities of the time were mentioned in the Cyrenean catalogue, beginning with Athens, still the foremost Greek city, followed by Olympias and Kleopatra, respectively King Alexander's mother and sister. At the very moment when the stele was engraved, the king of the Macedonians, who had destroyed the Persian Empire, was still campaigning in the legendary countries of the Far East. The presence in the list both of Athens and of the closest relatives of King Alexander enhanced the prestige of Cyrene. The Achaeans of the *Iliad* had won immortal glory for Greece when they had launched their vessels against Troy. Indeed, the Cyreneans did not enumerate ships or troops, but *medimnoi* of grain. But this was no negligible achievement. They had saved the Greeks from famine in a critical circumstance. When their peaceful ships had come back laden with grain, 'all the Greeks' had recognized their city as a universal benefactor. This exemplary attitude

<sup>72</sup> Athenian import from Bosphoros: Dem. 20.32. Mytilene: *IG* XII.2 3, with *IG* XII, Suppl. p. 2 (the figure is restored and the text alludes to a tax exemption for a certain quantity, but one should admit that Mytilene could indeed import amounts of grain at that level).

<sup>73</sup> Polyb. 3.33 and 56; Livy 28.40.16.

deserved to be kept in communal memory for future generations and justified the engraving of the list on a stone stele.

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## Some Aspects of Large Estate Management in the Greek World During Classical and Hellenistic Times

CHRISTOPHE CHANDEZON

Since the rise of ‘primitivist’ interpretations of ancient economies, it has become traditional to underline the underdevelopment of artisan workshops, and especially the small number of workers in this sector, even in the most important examples known through the sources. The Athenian shield factory of the metec Kephalos, the orator Lysias’ father, had 120 slaves. This is the highest number transmitted by an ancient document.<sup>1</sup> Excavations of the mines at Laurion certainly leave us with the feeling that the extraction and processing of ore must have occupied a substantial workforce. However, all this is a paltry basis for any generalization. The great *ergastēria* were not very large; nor were they at all common. It seems on the face of it unlikely that they would have needed much elaboration in management methods, or that they could have led to the development of original forms of organization, which might have served as models in other sectors of the economy.

In addition to the inherent modesty of artisan enterprises, another important element in ‘primitivist’ interpretation is the image of an agricultural routine, turned essentially towards self-sufficiency, a characteristic that has been applied equally to the peasant plot and the great estate.<sup>2</sup> The work done by agricultural specialists during the last thirty years has without doubt served to debunk this argument.<sup>3</sup> But this change of approach has consequences that economic historians have perhaps not yet sufficiently underlined. What is

English translations in this chapter are those from the Loeb collection.

<sup>1</sup> Lys. 1.19. On the size of artisan workshops, see Migeotte 2002: 80–2. See also Descat in this volume.

<sup>2</sup> Finley<sup>2</sup> 108–9.

<sup>3</sup> To appreciate this progress, it is enough (to cite only works in French), to compare Auguste Jardé’s arguments with what Marie-Claire Amouretti is writing now.

apparent is that big landowners were engaged in business ventures, employing a substantial number of people. Their enterprises called for elaborate techniques and a qualified, and supervised, workforce. Furthermore, there was nothing exceptional about this kind of business. It was not confined to some areas, but was to be found all over the Mediterranean world (and beyond it). So, it is in agriculture that we find the most frequent test-cases for a certain complexity and density of the structures of production. There is insufficient scope here for examining all the relevant data that could demonstrate this; only two aspects of the problem will therefore be developed. The first focuses on the presence of a qualified workforce to run the business of large estates; the other concerns accounting methods. These two dimensions of agricultural management are intimately linked. Our understanding of how a qualified workforce was used and managed has been considerably enhanced by detailed analyses of managerial techniques under the Roman Empire, although such studies take as their starting point a small number of texts from the fifth and especially the fourth century BC. This means that ideas about agricultural management before imperial times are out of step with these later developments.<sup>4</sup> The purpose of the following discussion is to try and fill this chronological and conceptual gap, by summarizing the evidence from the Hellenistic period. The topic of accounting has been at least as controversial as that of business management during the last half century. The debate over accounting has been highly theoretical and has recently been revitalized as a consequence of the investigation of several dossiers from Roman Egypt, containing quantifiable information.<sup>5</sup> Much remains to be revealed, however, particularly with regard to pre-Imperial practices.

A secondary objective of this work is to broach the subject of agrarian history from an economic perspective. Research work on the Greek countryside has often been centred on the history of techniques, or that of agrarian landscapes. Previously, it posed questions about the status of the land, of those who worked it, and their place in the world of the *polis*. In spite of some urgent appeals,<sup>6</sup> the economic role of agriculture has up to now stayed in the background. Specialists on Rome knew how to ask appropriate questions. Discussions about the strategies of big Roman landowners have taken new directions since the publication of a now famous article by Paul Veyne.<sup>7</sup> Dennis P. Kehoe, for example, has pursued the question of how much the great Roman landowners (in Italy, Egypt, and North Africa) had sought to safeguard their patrimony and accrue a regular income from it, at the price of

<sup>4</sup> Aubert 1994; Carlsen 1995; Carlsen 2002.

<sup>5</sup> Andreau 2004a; Bagnall 1997; MacVe 1985; Minaud 2005a; Rathbone 1991; De Ste Croix 1956.

<sup>6</sup> e.g. Descat 2004: 267, who stated, with some disappointment: 'l'étude de l'économie agricole [...] est restée un peu à la traîne'.

<sup>7</sup> Veyne 2001; the article was published for the first time in 1979.

renouncing more profitable and risky methods of management; whilst other researchers, sometimes using the same documents, have, by contrast, wanted to show undeniable proof of economic rationalism.<sup>8</sup> Such questions should also be pursued for the Greek world to further our understanding of its economic life.

## MANAGERS AND LANDOWNERS ON LARGE ESTATES

By grounding social prestige on landed wealth, and in reserving its control exclusively to citizens, the Greeks opened the door to a problem that Plutarch also confronted, namely that of the conflict of private interest and of service to the city.<sup>9</sup> Should one privilege the time owed to one's land, or the time devoted to political affairs?<sup>10</sup> One of the solutions was to divide up the working day. According to Xenophon, Ischomachos devoted only his mornings to his rural estate and lived in town the rest of the time.<sup>11</sup> It was nonetheless necessary for him to delegate a significant part of his decision-making power to bailiffs continuously present on the estate, as is shown in the long passages that Xenophon dedicated to how they were chosen and what qualities were expected of them. Later, in the Hellenistic period, the organization of the politician Philopoimen's day, as described by Plutarch (itself undoubtedly derived from Polybius), echoes Xenophon's advice. In the morning, Philopoimen was busy on his agricultural estate; for the rest of the day he was in Megalopolis, where he presided over public affairs.<sup>12</sup>

Landowners such as the fictional Ischomachos and the historical Philopoimen probably had a taste for supervising the running of their estates. According to Plutarch, Philopoimen did not hesitate to take part himself in agricultural work. He was one of those ancient gentlemen farmers who liked to talk amongst themselves as well as in the banquet halls about matters of the land and their estates. One could imagine him being a great reader of those agricultural treatises, whose production continued to burgeon in the fourth century and throughout the Hellenistic period. Plutarch called these people the *geōrgikoi*.<sup>13</sup> These figurative lovers of rural matters should not hide the fact that many landowners did not have much of a taste for looking after their lands. They were owners, but certainly not farmers. Jean Andreau has recently

<sup>8</sup> Kehoe 1993 (among other studies); see also Rathbone 1991 and Andreau 2004b.

<sup>9</sup> Plut. *Mor.* 20.794B; see also *Dem.* 22.5–7.

<sup>10</sup> Plutarch raised the question in several of his writings: so in *Mor.* 783B, 785C, 788C; 789C, 790B, 795E. For Plutarch, the answer was obvious: one should privilege public affairs.

<sup>11</sup> Xen. *Oec.* 11.14–17.

<sup>12</sup> Plut. *Phil.* 4.4.

<sup>13</sup> Plut. *Mor.* 619A.

shown that this type really and truly existed in Antiquity.<sup>14</sup> Such individuals can hardly have been uncommon.

Whether they supervised the running of their land from close quarters, or whether they turned away from it, landed proprietors did not avoid delegating decision-making powers to bailiffs and overseers. The differences are not identifiable in terms of resident and non-resident proprietors, but the agents themselves can be categorized according to the degree of control that they exercised over their bailiffs. The roles of master of the estate on the one hand—the *despotēs*—and of the bailiff on the other cannot easily be separated therefore, and their relationship was an essential factor in the efficient management of the most important properties (*oikoi*).

The oldest known case of resorting to a bailiff concerns Perikles' relation with Euangelos. Plutarch, who is our main source on this subject (in the well-known passage where he expounds the *oikonomia attikē*), does not specify Euangelos' title and only describes him as *oiketēs*, adding that he must have been an expert of *oikonomia*.<sup>15</sup> The appearance of an active agent in economic management, such as Euangelos, happened in a period when the *oikonomikos logos* emerged, whose first exponent was Sokrates' disciple Antisthenes. Raymond Descat has noted the chronological link between these two events, as well as the intense change that affected the world of those who managed such *oikoi* at that time. Before the last third of the fifth century,<sup>16</sup> the managerial function seems to have been, in essence, a feminine one. The 'traitorous bailiff', the *oikonomos dolia mnamōn*, referred to by Aischylos in the *Agamemnon*, illustrates this first type.<sup>17</sup> The figure of the female-*oikonomos*, however, never completely disappeared from Greek representations of management of the family patrimony. Lysias, in the last years of the fifth century, presented an Athenian couple, where the wife of one Euphiletos, at least at the beginning of their marriage, turned out to be an '*oikonomos deine kai pheidolos*', a household manager who was skilful and thrifty with money.<sup>18</sup> Even in Plutarch's time, the second century AD, the work of *oikonomia* remained associated with the feminine world. Unhappy women, who were married for their dowry, were then confined to depressing chores such as 'house-keeping and sordid accounting'.<sup>19</sup>

If the first historical reference to managers concerned Athens in the last third of the fifth century, evidence abounds in the subsequent century. Quite early on, the role of managers seems to have been the object of theoretical thinking. Antisthenes was the author of a treatise entitled *Of the epitropos* or

<sup>14</sup> Andreau 2004b: 82–4.

<sup>15</sup> Plut. *Per.* 16.6. See Stadter 1989: 198.

<sup>16</sup> Descat 1988: 105–6; Spahn 1984: 304–6.

<sup>17</sup> Aeschylus A. 155.

<sup>18</sup> Lys. 1.7. <sup>19</sup> Plut. *Mor.* 767c.

*On Obedience*,<sup>20</sup> which is now lost, but was probably written near the end of the fifth century. Of equal significance is the only epigraphic reference to an *epitropos*, dating from the beginning of the fourth century. It comes from the vicinity of a farm in Attika, the so-called Farm of Timesios, situated slightly north of Sounion. This inscription contains an Athenian calendar dedicated to Hermes by an individual whose name is incomplete (An[...])soros) and who is named as *epitropos chōriou*.<sup>21</sup> The inscription does not allow any conclusions as to the status of this *epitropos*: perhaps he was a slave or a freedman, because his name is not accompanied by a patronymic or a demotic. But it was undoubtedly he who ran the business of this estate in the absence of the owner.<sup>22</sup>

The most well-known source about agricultural overseers in the area of agriculture is in Xenophon's treatise, *Oikonomikos* (12.2–14.10). Xenophon, who was also a disciple of Sokrates, in talking about these overseers likewise uses the word *epitropos*, which seems to have been the standard term for such a job in fourth century Athens. The words Xenophon uses show that an *epitropos* was supposed to be a slave, and Ischomachos tells Sokrates that he would rather train the man himself to do the job than acquire a slave who already has experience of management. The description that follows, detailing the qualities required of an *epitropos*—care, devotion, honesty, authority—are the first of a series of specifications that continue in specialist literature, including Latin treatises on agriculture, which focus on the qualities of a good *uilicus*. The qualities that both Xenophon and Columella recommend, for example, are very often the same. Xenophon's writings allow one to see that the landlord expects his overseer to run the agricultural business and make decisions that arise; he should also learn to 'rule the labourers' (*ergazomenoi*).<sup>23</sup> It is also on his shoulders that the management of the reserves falls, and, on this point, his honesty should be faultless. Obviously, he should not give a bad example by stealing from his master, explains Xenophon, in a passage that shows how strong the fear was that slaves could commit theft on the estate.<sup>24</sup>

Another set of allusions about overseers in agriculture can be found in the writings of Aristotle's students, at the beginning of the Hellenistic period. They

<sup>20</sup> This treatise is mentioned by Diog. Laertius 6.16; the Greek title is *Peri epitropou ē peri tou peithesthai* (just above, another treatise is entitled *Peri nikēs oikonomikos*). See also in Andreau and Descat 2006: 116.

<sup>21</sup> Langdon and Vance Watrous 1977: 168–73 and pl. 46–7. The editors were satisfied with a date in the fourth century, J. and L. Robert, *Bull.*, 1978: 185, add: 'disons plutôt le début'. For the excavations of this farm, see Young 1956.

<sup>22</sup> For all the texts related to this farm, see Carlsen 2002: 120, with a comprehensive bibliography.

<sup>23</sup> Xen. *Oec.* 13.3.

<sup>24</sup> Xen. *Oec.* 14.2.

often refer to the ethical relationship between a master and his *epitropos*. In *Politics*, Aristotle explained that the master could hand over the right to command his slaves to an *epitropos*, in order to be able to take part in politics and philosophy.<sup>25</sup> This idea can be found in another Aristotelian treatise, the *Magna Moralia*, which focuses on the subject of *phronēsis* (intention). Here, Aristotle writes that *phronēsis* is 'like an *epitropos* in the house (*oikia*), who is there the master of all and there ministers to everything; still, he is not the master of all, but affords leisure (*scholē*) to his lord, so that he, not distracted by the care of daily necessities, may not be debarred from any of those noble actions that befit him'.<sup>26</sup> The pseudo-Aristotelian *Oikonomika* classifies slaves into two categories: the *epitropos* and *ergatai*.<sup>27</sup> This text adds that it is necessary for the landlord to control his overseer, often because it is a way of getting more enthusiasm out of him.<sup>28</sup> The intensity of this control will depend on the size of the business. In the case of small businesses, the master could be satisfied with a visit from time to time, but for those that are entrusted to an *epitropos*, he has to show his presence more often in order to give the overseer a good example.<sup>29</sup> The same treatise mentions a second employee with a specific function among the slaves supervised by the *epitropos*, namely the porter (*thyrōros*). This man also took part in the good running of the estate, because it was his duty 'to keep an eye on what passes in and out'.<sup>30</sup>

The texts are unanimous in acknowledging that these managers were slaves. There had perhaps been some exceptions to this, but they were undoubtedly very rare. Many researchers have asked themselves if some lines in Xenophon's *Memorabilia* make allusions to Athenian citizens who could have worked as overseers. In this passage, it refers to an Athenian, Eutheros, a landowner ruined by the Peloponnesian War, who finds himself without any resources. Sokrates advises him therefore to use his talents concerning agricultural business by working for a landowner, 'by acting as a bailiff, helping to get in his crops and looking after his property'.<sup>31</sup> This translation disguises the fact that in the Greek text the word *epitropos* is not used. Eutheros was more likely to be the *epistatēs* of his employer, as this title preserved them from losing face in a relationship between equals. Eutheros protests to Sokrates that he would not want to behave in a servile manner. Apparently, in Classical

<sup>25</sup> Arist. *Pol.* 1.7.5.1255b35.

<sup>26</sup> Arist. *M.M.* 1.34.31, 1198b,13; the Loeb translation has been modified for the beginning of the text.

<sup>27</sup> [Arist.] *Oec.* 1.5.1.1344a25.

<sup>28</sup> Ibid. 1.6.4.1345a10.

<sup>29</sup> Ibid. 1.6.4.1345a5.

<sup>30</sup> Ibid. 1.6.8.1345a30–35.

<sup>31</sup> Xen. *Mem.* 2.8: *ergon te epistatounta*. Concerning this passage, see Audring 1973: 113–14, and Carlsen 2002: 119–20. It should be noted that in *Oec.* 1.3–4, Xenophon envisages in a very theoretical manner that one can see oneself being entrusted with the managing of someone else's patrimony.



Athens, the world of managers was populated by slaves and probably also freedmen.

Before turning to texts of the Hellenistic period, there are two things to add about early examples of managers. The first is useful in putting some order into the preceding list of examples. It is important not to put Euangelos on the same level as the *epitropoi*. Euangelos is not at the head of a specific business belonging to Perikles. He managed the whole of his master's fortune and probably lived in his close family circle. He was a businessman, who lived in town. He was more likely to be a bailiff than an estate overseer. There were already in this period many kinds of managers at the service of wealthier people. Some were overseers of agricultural estates, country men, and others were bailiffs living in town, who undoubtedly took as much part in financial operations, as they did in the supervision of productive activity. This distinction between town and country overseers is found in Greece during the early Roman Empire. Sources therefore distinguish between *pragmateutai*, who lived in town and invested their master's money by loaning it, and *oikonomoi*, who were overseers of the estates. Plutarch makes a distinction, for example, between these two types of managing staff, and inscriptions refer to numerous examples.<sup>32</sup> In case these realities of economic life in Plutarch's Greece might be thought to have introduced anachronistic details into the *Life of Perikles*,<sup>33</sup> it seems nonetheless that the whole passage about the private *oikonomia* of Perikles rests on precise information and an ancient source. Aristotle's very general remarks could, moreover, be applied to urban bailiffs as well as to overseers of agricultural estates.<sup>34</sup>

The second point is about vocabulary. There seems to have been considerable flexibility in the use of words designating managers.<sup>35</sup> Certain words are characteristic of certain periods or of certain areas, rather than reflecting different situations. It is therefore inappropriate to substitute different meanings to terms that the sources use. That being said, it must be noted that Athenian sources from the Classical period designated overseers exclusively by the term *epitropos*. Later on, the word *epitropos* continued to be thought of as being characteristic of the Attic dialect, which later dictionaries gloss as *oikonomos*.<sup>36</sup>

<sup>32</sup> The sources concerning them are abundant. For the *pragmateutai*, we refer only to Plut. *Mor.* 2.827F; 7.831 A. See also, from the same author, *Mor.* 4.525A. For the epigraphic evidence, see Robert 1937: 240–3, and Robert 1987: 124–8.

<sup>33</sup> Carlsen 2002: 126 n. 28.

<sup>34</sup> Ibid. 122.

<sup>35</sup> See the useful discussion in Carlsen 2002: 117–18.

<sup>36</sup> When the word is not used to designate the guardian of orphans; see also Moeris (ed. Bekker, 1833), 211. Hesychius (ed. Latte, 1966), gives a definition of *epitropos*. In the article *meledonos*, there is also an interesting list of titles given to bailiffs of agricultural estates where *phrontistēs* appears, a term which was used a lot in Roman Egypt. In the inscriptions, the Latin

In the Hellenistic period, this same word, with its Classical meaning of 'bailiff', became very rare. It was still used by Plutarch, when talking about Eumenes of Kardia, in a passage where the latter refused to pay the whole of a sum that Alexander asked of him for the royal treasury: 'to obtain this sum from his overseers (*epitropoi*) he had a very hard time.' This money was supposed to have been taken from Eumenes of Kardia's personal fortune, which shows that these overseers really managed his private property.<sup>37</sup> Other terms effectively became indispensable in Hellenistic sources, which use a vocabulary that is more varied in describing managers in the service of the very wealthy. There is, for example, the term *dioikētēs*, which Plutarch uses when talking about Aratos of Sikyon's bailiffs. The Achaian leader owned property and a house at Korinth, explains Plutarch. He sometimes went to that town when business affairs needed his presence. There his property was managed by *diokētai*, who had to account to him.<sup>38</sup> These are not therefore people who manage agricultural estates, but who correspond to the urban bailiff.

The most well-known bailiff of the Hellenistic period is without a doubt Zenon of Kaunos, the manager of the *dorea* (estates granted by a ruler), which became the property of the *dioikētēs* Apollonios, during the reign of Ptolemy II Philadelphos. His extensive archives do not, however, say what title he held, when he was in Apollonios' service. Moreover, there has been a surprising lack of curiosity about his status in the scholarly literature.<sup>39</sup> Only one, undated, papyrus, which seems on internal evidence to go back to the period when Zenon was not yet in charge of the *dorea* in Philadelphia, appears to give him the title of *oikonomos*. This text is a letter sent by a certain Aristaios, writing to Aratos, a man in the service of Apollonios. It was evidently meant to be a reminder to 'Zenon, the *oikonomos*, and to Kriton, the *stolarchos*'<sup>40</sup> of various tasks outstanding. When the title of *oikonomos* appears elsewhere in the archives, it names royal employees, who exercised the role of shift workers of the *dioikētēs* in the nomes.<sup>41</sup> It is not therefore surprising to find frequent mention of the king's treasurer bearing Zenon's name, in a papyrus archive of the *dioikētēs* Apollonios, even if Ptolemaic prosopography knows no other

translation of these Greek words shows proof of great flexibility: Carlsen 1995: 15–16, Carlsen 2002: 117.

<sup>37</sup> Plut. *Eum.* 2.5.

<sup>38</sup> Plut. *Arat.* 41.4.

<sup>39</sup> Rostovtzeff 1922: 22, was one of the only scholars to raise this question, followed by Durand 1997: 29 ('Pourant, nous ne lui connaissons aucun titre officiel dans la nomenclature des bureaux'). Grier 1934: 43 and 47, considers the title of *oikonomos* as that of Zenon.

<sup>40</sup> PCZ 59048, 1.1–2, *Zenoni | tōi oikonomōi kai Kritōni stolarchēi*. The editors date this document to 257 BC but it does not appear in Xavier Durand's book on the Syrian file. About Kriton the *stolarchēs*: Peremans and Van't Dack 1963: 122–3, no. 13771.

<sup>41</sup> Pestman 1981: 521.

treasurer by the name of Zenon.<sup>42</sup> Generally, the records make do by naming Zenon without giving him a title, or else, they simply say ‘Zenon, from the house of Apollonios’ (*ho par’ Apolloniou*) or even ‘Zenon, the one of Apollonios’ (*Zenon tou Apolloniou*).<sup>43</sup> Zenon’s official title in Apollonios’ service is therefore unknown, if ever Apollonios had thought of giving one to his servant. Later, after having left Apollonios’ service, Zenon used the same kind of expression in a letter intended for Ptolemy III, to talk about the position he had in the service of the old *dioikētēs* up until 248 or 247: ‘I was—he wrote—at the head of Apollonios’ *dorea* in Philadelphia’, which suggests that the title of *epistates* could be given to an overseer.<sup>44</sup> Those who came after he had left Apollonios’ service were themselves bearers of vague titles. For example, a papyrus designates Bion simply by the expression ‘the one who is in control of properties that are near Philadelphia’.<sup>45</sup>

However, we know other managers of the Hellenistic period who held the same title of *oikonomos*, or at least a title that comes near to it. The documents that concern them this time come from the Seleukid kingdom and will be examined in chronological order. The first is a decree from the villagers of Neoteichos and of Kiddiourke close to the place where Laodikeia by the Lykos was founded. This text dates from January 267 BC. The villages had been attacked by the Galatians and, in order to defend themselves, they received help from two men who worked for a member of the royal family, called Achaios the Elder, who had evidently received the sector as *dorea*. The two men, honoured by the villagers, are a certain Banabelos—whose father’s name is not specified—and Lachares, son of Papos. The first one managed the patrimony of Achaios (*ho oikonomōn*: the man managing the property); the second one was Achaios’ head accountant (*eklogistēs*).<sup>46</sup> The title that Banabelos receives is not exactly that of *oikonomos*, as it is formed with the participle of the verb *oiknomein*. The man was undoubtedly of Semitic origin, or so the name Banabelos implies, as Michael Wörrle has pointed out. The exact function of the *eklogistēs* in managing Achaios’ estate is difficult to determine, but it is obvious that the two men must have worked in close collaboration. The inscription allows no doubt about the fact that they happened to be on the *dorea* at the time when the attack of the Galatians happened, in contrast to Achaios, who might otherwise have intervened in

<sup>42</sup> Peremans and Van’t Dack 1950: 98, no. 1044, see in this text a reference to Zenon of Kaunos.

<sup>43</sup> Peremans and Van’t Dack 1950: 11, no. 80.

<sup>44</sup> PCZ 59832, l. 2–3: *Ap(ollōniou) [eimi] epstatēsā tēs | em Philadelphēia dōreas*. See also the *prostēkōs* who manages another *doreon*, that of Hierax, situated at Sobthis: Peremans and Van’t Dack 1959: 172, no. 10085. There are other examples of uses of this title in *dorea*: Peremans and Van’t Dack 1959: 173, no. 10087, 10094 and 10096.

<sup>45</sup> PCZ 59366, l. 16–18, *tōi metalabonti | tēn epistateian tōn kata Philadelphēian*.

<sup>46</sup> Wörrle 1975: 59, l. 6–9, (for commentary on this passage, 81–4).

their place. Banabelos and Lachares therefore do not appear to constitute a staff team at some remove in the administration of Achaïos' wealth. As in the case of Zenon, the mission that they have been entrusted with doubtless did not exclude movement, but meant that they lived on the premises.

The second case shows a slightly different picture concerning the same point, but also involves the property of a member of the Seleukid royal family, Queen Laodike II, after her divorce from King Antiochos II. On this occasion, in 254/3, the king sold to his ex-wife a piece of land of considerable size between Kyzikos and Zeleia. The fact that the lands had been sold and not given to the Queen perhaps sheltered her to some extent from the uncertainties to which *doreai* might be subjected. However, from a legal point of view, the estate that was obtained undoubtedly belongs to the category of *doreai*. In the letter informing his local representative of the sale, Antiochos II ordered him to make known the situation concerning these lands 'to Arrhidaïos, the one who has the management of Laodike's business affairs (*ho oikonomôn ta Laodikes*)'.<sup>47</sup> The similarity of wording with the previous inscription is striking.<sup>48</sup> Once again the title given to Arrhidaïos is formed with a present participle (*ho oikonomôn*); it is not really that of *oikonomos*. On the other hand, it seems rather unlikely that Arrhidaïos had lived on the premises, since the Queen was moving into the region for the first time. He appears more like the Queen's main financial official, at the service of her private patrimony. Laodike II owned properties scattered throughout a good part of the kingdom, in Babylon and perhaps also in Karia.<sup>49</sup> It is probable therefore that her *oikonomôn* exercised his mission on a central level, for the whole of the Queen's properties. In this respect, Arrhidaïos should not be placed on exactly the same level as Banabelos, Achaïos' man. The similarity in the wording is misleading.

There is, on the other hand, something in common between Zenon, Banabelos, Lachares, and Arrhidaïos. Nothing indicates that these men were not free-born managers. Something had changed since the fourth and early third century, when Xenophon or the anonymous author of the Aristotelian *Oikonomikos* supposed that only slaves could become bailiffs. Such a change explains why, at the end of the Hellenistic period, Philodemos of Gadara could write, in conscious contradiction with Aristotelian writing, that the existence of non-slave bailiffs was a reality.<sup>50</sup> But this change should undoubtedly be put into perspective as a result of the disproportionate size of the businesses that Zenon or Banabelos directed, and as a result of the social status

<sup>47</sup> Welles 1934: no. 18–20 (no. 18, 1. 24–5—cf. no. 20, 1.4).

<sup>48</sup> Schuler 1998: 188.

<sup>49</sup> Wörle 1975: 82.

<sup>50</sup> Phil. *Oec.* col. IX, lines 16–20, p. 30, ed. Jensen, *versus* [Arist.] *Oec.* 1.5. 1344b,25. See Scheidel 1990: 592. Rathbone 1997: 1178, notices the change in status since Classical times.

of those whom they served, who were much wealthier than the masters of the Athenian overseers of the Classical period. Perhaps if, for the Hellenistic period, we had sources that could give us information about the businesses of the civil élite, we would realize that their overseers were often slaves, as is shown by the theoretical treaties for the Classical period and funeral *stelai* from the Roman East.

A real problem arises with the links between the titles of the private managers and bailiffs of Hellenistic times, and the titles given to royal administrators of the same period. The existence of the *oikonomoi* in the royal administrations of Lagid and Seleukid dynasties is a well-known fact.<sup>51</sup> Even if it is still difficult to understand how the different parts of the financial administration were articulated in these two monarchies, especially in the Seleukid kingdom, it is nonetheless true to say that they had recourse to *dioikētai*, to *oikonomoi*, and to *eklogistai*. In Egypt, there was one steward in each nome, who took care of the local finances, as well as of the tax revenues. The most westerly part of the Seleukid kingdom was divided into financial districts called *oikonomiai*, which were headed by stewards under the orders of the central financial services in Sardeis. There were some stewards left in the Attalid administration when it was replaced by the Seleukids in Cistauric Asia.<sup>52</sup> Among the Seleukids as among the Lagids, the financial administration also had recourse to chief accountants, the *eklogistai*. In the Seleukid kingdom, they worked in the immediate surroundings of the *dioikētēs* and seemed to take care of the taxation of the cities concerned. In Egypt, there was an *eklogistēs* in the service of the *dioikētēs* and others who exercised these functions in the nomes, in offices called *eklogistēria*.<sup>53</sup> The titles of *oikonomoi* and *eklogistai* were also used to designate financial magistrates in many Hellenistic cities.<sup>54</sup>

The similarity in the titles used by the kings, and by Greek cities, with those of the men who worked for the beneficiaries of the *doreai*, in the Seleukid as in the Ptolemaic kingdom, is certainly not an accident. Granted that the

<sup>51</sup> For the Seleukid kingdom see Ma 135–6, Capdetrey 2006: 360–1. For the treasurer, even in the Lagid overseas possessions, such as Limyra in Lycia: Wörrle 1977: 44, 1. 2–5, 2. Kaunians had been designated as *oikonomoi tēs chōras* by King Ptolemy I, in an inscription that dates from 288/7 BC (commentary, 57–62). See in general Bagnall 1976: 224–9.

<sup>52</sup> Ma 136.

<sup>53</sup> For the Seleukid kingdom: Ma 135. For Egypt, see Wilcken 1899: 1.494–5; Préaux 454 n. 2. About the royal *eklogistai* in general, Fröhlich 2004: 205–8.

<sup>54</sup> On *oikonomoi* in Greek cities, see Ampolo 1979: 120–4, and Schuler 2005: 399. New evidence confirms that such officials were especially frequent in the coastal cities of Asia Minor, for instance at Kolophon (see Robert, L., and Robert, J. 1989: 61–2; the old German dissertation of Landvogt 1908 is no longer of great interest). Amongst the three, *eklogistai* are of course the best known financial officials. With regard to the role they played in the examination of public accounts, see Fröhlich 2004: 208–32. In Greek cities, the most frequent title for magistrates concerned by *dioikēsis* was *hoi epi tēs dioikēseos*; see Schuler 2005.

evolution of management practices in Classical Athens had some influence, the financial administration of the kingdoms undoubtedly served as a model to the beneficiaries of the *doreai*, who often belonged to the close circle of the king, and even to his family, as was the case of Achaïos and of Queen Laodike. This interplay of mutual influences is even more likely as the personal patrimony of the king was not always clearly separated from the kingdom itself. This undoubtedly also explains why the Attic word *epitropos* did not impose itself on the Hellenistic world at large to describe the bailiff or overseer in the service of the private landowner. In the eastern Roman provinces, the word *oikonomos* was often used to designate the equivalent of *uiculus* in the western part of the Empire.<sup>55</sup> Peter Landvogt sensed the influence of the civil and monarchic models on the supervision of great wealth, in his dissertation on the *oikonomos*.<sup>56</sup> We know that the word *oikonomos* had been used at the level of kingdoms and of cities in c.320 BC with regard to financial administration. Inscriptions of the later Hellenistic period show much the same phenomenon. The *oikonomos* was the logical person in charge of economic management in cities and kingdoms. But the title had evidently reverted to the management of big private agricultural properties. There may nevertheless have been a distinction between two layers of administrators. This double staging has been well testified in imperial Greece and Asia Minor, where a level of *pragmateutai* can be clearly distinguished. They lived in town and managed the business affairs of a very rich individual, business that was often dispersed geographically and economically, and very diverse in nature. *Oikonomoi*, on the other hand, were the overseers of agricultural estates. Aratos' *dioiketai* were perhaps responsible for the central management of property on behalf of the Achaian leader. Such was the case with Queen Laodike's *oikonomôn*, who owned properties dispersed throughout the whole of the Seleukid kingdom. Zenon was attached to a specific estate, that in the Fayum, but the scope of his activities in Apollonios' service extended beyond the estate near Philadelphia. This estate moreover was not the only one owned by the *dioiketes*. There was at least one more in the Memphite nome, which had its own supervision, at the head of which, during the years 258–257, were two men, Addaios and Nikon.<sup>57</sup> In 256–255, they lost favour with Apollonios, perhaps because of embezzlement. The running of the Memphite *dorea* then passed on to a certain Artemidoros, son of Socharos. But the separation of the two administrations, that of the Arsinoite nome, and of the Memphite nome, was not absolute, as Zenon was quite often involved in the business affairs of the Memphite *dorea*. Might Apollonios have had a headquarters for the management of his properties, as Appianus had in the third century AD, who subordinated the managers of his various Egyptian

<sup>55</sup> Aubert 1994: 33 (esp. n. 117).

<sup>56</sup> Landvogt 1908: 11.

<sup>57</sup> Wipszycka 1961.

estates to a central administration, run by a certain Alypius from the Foyniate market town of Theadelphia?<sup>58</sup> Although we cannot have a definitive answer, we can agree that two administrative layers did exist, even if they are apparent only in cases of exceptional wealth. In most cases, only one level of overseers existed.

## RECORD-KEEPING AND ACCOUNTING

At the same time as documents start mentioning the existence of trained managers working for big landowners, accountancy also appears for the first time. The account book (*grammateion*)<sup>59</sup> and written accounts (*logos*), recording expenditures (*analōma*) and receipts (*lemma*), from this time onwards entered progressively into public and private affairs.<sup>60</sup>

This simultaneity was certainly not the product of chance and evidently reflects two sides of the 'oikonomic' revolution. Euangelos, while managing Perikles' wealth, according to Plutarch, calculated the expenditure of the *oikos* of his master on a day-to-day basis (*ephēmeron*).<sup>61</sup> Plutarch could be accused of covering-up the methods of managing Perikles' fortune in a slightly anachronistic way. But other documents confirm the practice of private bookkeeping in Classical Athens. In Xenophon's *Oikonomikos*, the responsibility for bookkeeping in the estate falls not on the overseer but on the mistress of the house, Ischomachos' wife, who plays the role of the *tamias*, the treasurer. She has to receive the harvests, calculate and organize the expenditures, assess the amount of reserves to be made and 'make sure she spends not in one month the expenses planned for one year'.<sup>62</sup> Another passage of the treatise goes back to the management of reserves: 'We will equally separate that which we spend month after month, and put to one side that which is calculated for the year; we can thus see better how these provisions will last until the end.'<sup>63</sup> In managing the estate's reserves, Xenophon suggests a double unity of time, the month and the year. This double level of bookkeeping seems to have been very frequent. This can be found in the pseudo-Aristotelian passage of *Oikonomika* which explains that, in the big estates, 'there is good reason to distinguish the

<sup>58</sup> Rathbone 1991: 58–71.

<sup>59</sup> The word is not very often found in this technical sense, but it appears however in Ar. *Nub.* 19, or [Demosth.] 52.6.

<sup>60</sup> Grier 1934: 67–9, provides a useful index of Greek bookkeeping terms taken from Zenon's archives.

<sup>61</sup> Plut. *Per.* 16.4.

<sup>62</sup> Xen. *Oec.* 7.36.

<sup>63</sup> Xen. *Oec.* 9.8. See Pomeroy 1994: 55–7, who has gathered together bookkeeping practices mentioned in Xenophon's work.

annual expenditures from the monthly expenditures' (*pros eniauton, kata mēna*) and that it is the overseer's job to do so, the master's duty therefore being only to carry out a regular inspection (*episkepsis*).<sup>64</sup> The classification of expenditures is thus made on a monthly and yearly basis.<sup>65</sup> The month also appears as an important unit of time in the running of public bookkeeping, as we will see later on, and in commercial bookkeeping. In Athens, in Lykourgos' time, the owner of three perfume shops made them produce accounts every month.<sup>66</sup> These two rhythms can be found again in the bookkeeping of big estates. However, documents of the Classical period still lack an element that the papyri expose in full for the Hellenistic period, namely the day-by-day account (*ephēmeris*).

On large estates of first half of the fourth century BC, there were individuals who kept books of domestic accounts where they registered, for example, the loans they made and the dates that the interest was due. Strepsiades in Aristophanes' *Clouds* behaves in this manner and has his own book of accounts.<sup>67</sup> Commercial bookkeeping and banking are the principal sources of accounting in Classical Athens.<sup>68</sup> Alain Bresson has shown that maritime commerce also used written documents from the very beginning of the fourth century, and that *emporoi* (merchants) kept accounts that they carried with them and which constituted genuine bookkeeping log-books.<sup>69</sup> It is in the context of these other sectors that bookkeeping appeared on large rural estates. In order to understand the significance of these processes, we need to look more closely at the logic of accountancy and the influence exerted by public bookkeeping.<sup>70</sup>

Papyrus documentation must have been helpful in understanding the uses of accountancy and the functions of bookkeeping in big Hellenistic businesses, especially for the accounts that made up a good part of the archives of Zenon of Kaunos. These documents refer to the management of Apollonios' *dorea*, as well as Zenon's personal property. And yet, papyrus documentation has never received the attention it deserves in the history of accountancy.<sup>71</sup> Only a little book by Elizabeth Grier has been, in the past, entirely dedicated to this question.<sup>72</sup> Scholars who have studied Zenon's records closely have been less

<sup>64</sup> [Arist.] *Oec.* 1.6.6.1345a20.

<sup>65</sup> See also in Lysias 32.20 (the whole speech is of great interest with regard to bookkeeping in private accounts).

<sup>66</sup> *Hyp. Ath.* 19.

<sup>67</sup> *Ar. Nub.* 18–24.

<sup>68</sup> For banking accountancy, see e.g. [Demosth.] 52.6, a passage studied by De Ste. Croix 1956: 27–8.

<sup>69</sup> Bresson 141–4.

<sup>70</sup> The question is clearly raised by Mickwitz 1937: 589.

<sup>71</sup> The most detailed study remains that of Orrieux 1985: 58–70. The vision that he develops about the function of bookkeeping in the *dōrea* corresponds to Finley's theory: they are used just for controlling and helping to manage conflicts; not to estimate the profitability of the business (see p. 65–70, where this is clearly stated). See also Préaux 1947: 75–9.

<sup>72</sup> Grier 1934.



interested in formal aspects of his bookkeeping.<sup>73</sup> Students of Hellenistic bookkeeping are therefore far from having a synthesis as remarkable as Dominic Rathbone's on the Heroninos accounts, belonging to a bailiff (a *phrontistes*, a frequent title at this time in Egypt) of the third century AD in the Fayum.<sup>74</sup> This is why Zenon's accounts have not really been used in recent discussions about the functions of bookkeeping in large-scale Graeco-Roman businesses. This makes it impossible to render a systematic comparison between Zenon's practices in the third century BC and those of Heroninos six centuries later.

The number of bookkeeping documents in the archives of Apollonios' *dorea* is impressive; but it is difficult to organize these texts into clear categories and to restore their logic and hierarchy. To begin with, there is an absence of annual summaries that would be the equivalent of a ledger. Undoubtedly these annual summaries had been sent to Apollonios and, if Zenon had kept a copy, which is likely, he must have left it for those who had taken over the running of Philadelphia's estate after him.<sup>75</sup> The remainder therefore consists only of accounts made at a preliminary stages of a compilation.

Some clear distinctions nevertheless appear right away and correspond to the foundations of a Zenonian type of bookkeeping. Accounting historians had immediately made note of the contrast between accounts paid in cash (*argyrikoï logoi*, money accounts) and the accounts paid in kind (for example the *sitikoï logoi*, the grain accounts, which were the most important single group).<sup>76</sup> The use of the *sitometria* for paying *dorea* employees, and Zenon himself, only reinforced this tendency. There is nothing original in the existence of these two kinds of accounts, but the distinction reflects the two faces of ancient economies. In Italy, some decades later, Cato the Elder referred to multiple forms of bookkeeping in the *uilla* of his period. The accounts in money appear next to others in cereals, in wine, or in oil.<sup>77</sup> Another, more subtle distinction, concerns the separation between accounts that belong to Apollonios' *dorea* and those of Zenon's own agricultural business. The care with which the separation is made does seem to indicate that Zenon wanted to avoid giving the impression that he had taken advantage of his position as

<sup>73</sup> The most significant are those of Orrieux 1981: 318.

<sup>74</sup> Rathbone 1991: 331–87, esp. 369–87, and with some of the texts translated, 424–63. For the study of an even more recent bookkeeping document, the accounts of Kellis, see Bagnall 1997 and the remarks of Andreau 2004a. Undoubtedly because of a lack of familiarity with Greek and papyrus sources, Minaud 2005a has not used this kind of document much in his synthesis.

<sup>75</sup> Grier 1934: 14.

<sup>76</sup> Grier 1934: 9; MacVe 1985: 235.

<sup>77</sup> Cato Agr. 2.5: *rationes . . . argentariam, frumentariam . . . rationem uinariam, oleariam*. See Minaud 2005a: 72.

*dioiketes* to make his own business profitable.<sup>78</sup> This distinction contrasts with the enmeshing of the accounts concerning Apollonios' private businesses and those that are related to his official function in the royal finances.<sup>79</sup>

In Zenon's records, there is also a discrepancy between a group of extremely short accounts and others that are much longer. The first ones allow a business to be followed over a lengthy period of time, for example in the management of a piece of land either put up for rent, or rented for a sum of money entrusted to the care of a colleague.<sup>80</sup> This is what is called third-party bookkeeping. Many transactions can thus be followed, sometimes over several years. Other accounts were made to keep an inventory of stock. The daily journal, the *ephēmeris*, records day-by-day accounts of all activities in a particular cash register. It often begins with the sums of money received and finishes with a monthly total (*kephalaion*). To all appearances, the month is a unity of time that was essential in the keeping of accounts. One *ephēmeris* from July 225 had thus been kept for a month and records money coming in and going out.<sup>81</sup> Such documents are often particularly long.

The *ephēmerides* are themselves divided into two groups, according to whether they concern sums of money, in which case they are recorded as cash payments (cash *ephēmeris*), or products registered in kind, in which case they are written in kind (shop *ephēmeris*, store records). A long account for cereals (a *sitikos logos*), from 250 BC, belonging to the second category, for example, starts with an inventory of available stock and finishes with an end-of-month assessment. It registers outgoing cereals for the sowing period, the employees' wages, food for the cattle, etc.<sup>82</sup> The monthly rhythm, which was already apparent in Xenophon's writings, can be found several centuries later, in the Heroninos archives of the same Fayum, where the monthly accounts again make up the essential accounting information that has survived.<sup>83</sup>

Certain practical aspects of Zenon's bookkeeping work are also apparent from an examination of his accounts. First of all, he was not the only accountant in the service of the *dioikētēs* Apollonios. In the year 250, a certain Pyron played an important role in bookkeeping.<sup>84</sup> This kind of activity uses up great quantities of papyrus rolls and the accounts mention their purchase and distribution between different boards.<sup>85</sup> At the beginning of his bookkeeping

<sup>78</sup> Orrieux 1981: 327–8.

<sup>79</sup> Grier 1934: 6–7.

<sup>80</sup> Grier 1934: 19–22. In the case of the accounts for a piece of land, the sums due by the farmer of the land are registered as well as those he has paid in; for example, PCZ 59252, in 252 (*logoi geōrgikoi*) or PCZ 59268 (*logos geōrgias*).

<sup>81</sup> PCZ 59176; the Greek text gives this document the name of *ephemeris*. See also PCZ 59701, 59745, 59746, 59787 etc.

<sup>82</sup> PCZ 59592. See also PCZ 59718, 59721, 59722, 59737, 59782.

<sup>83</sup> Rathbone 1991: 335–59.

<sup>84</sup> Grier 1934: 11–12.

<sup>85</sup> Grier 1934: 10. See also Heroninos' accounts: Rathbone 1991: 9–13.

career, Zenon asked himself which calendar he should use, hesitating between a Macedonian and an Egyptian calendar. At the end of two years, he finally opted for an Egyptian calendar, probably because it was more widely used in the circles that he moved in.<sup>86</sup>

It is quite difficult to find one's way around in all this information, which seems perfectly clear to the ancient users. There is no document to explain its internal organisation. The recipient of the accounts is Zenon. He checks them and proceeds with a *dialogismos*. People who are required to give explanations (*dialogizesthai*) present themselves.<sup>87</sup> The controlling function of the accounts is striking and they appear perfectly adapted to this task.<sup>88</sup> This raises the fundamental question about the function of bookkeeping in the management of Apollonios' *dorea* and in agriculture in general. When Gunnar Mickwitz (1937) and Claude Orrieux (1981) gave their opinions on this point, they first insisted on a fundamental difference with later practices. For Mickwitz, the first task is to avoid embezzlement by the estate's managing staff. For Orrieux, this is also a job which allowed expenditures to be anticipated, to plan how much a transaction will cost. But it is not used to check retrospectively the profitability that it represents. The model seems to have been that of royal estate management, where larger issues, such as the possible extent of the Nile's flood, and the amount of grain necessary to cultivate royal land, were at stake.<sup>89</sup> The function of Zenon's accounts is therefore to budget.<sup>90</sup> Claude Orrieux's view is therefore in line with 'primitivist' theories.

Mickwitz was one of the first to show that Graeco-Roman bookkeeping was not adapted to making decisions about economies. These techniques made it impossible to assess the profitability of different activities on a large estate.<sup>91</sup> In 1956 Geoffrey de Ste Croix had stressed the drastic differences that separated ancient bookkeeping from our own.<sup>92</sup> This was a system in which the chronological ordering of receipts and expenditures had become regular practice. But there was, in his view, no attempt to convert into cash expenditures made in kind, and no significant progress in bookkeeping techniques between Classical Greece and the Imperial period. No bookkeeping information handed down from ancient times indicates any familiarity with anything resembling double-entry bookkeeping, which appeared much later on in medieval

<sup>86</sup> Grier 1934: 22–3.

<sup>87</sup> PCZ 59516.

<sup>88</sup> Mickwitz 1937: 579.

<sup>89</sup> Orrieux 1981: 318. About the historiography of ancient accountancy, see Bresson and Bresson 2004: 92–101.

<sup>90</sup> Such an explanation does not however explain the role of accounts that record the expenditures made.

<sup>91</sup> Mickwitz 1937.

<sup>92</sup> De Ste. Croix 1956, esp. 21–33, for accounting techniques of the Classical and Hellenistic periods. He admits himself to having devoted only a small amount of space to bookkeeping in the Hellenistic period, in spite of the abundance of documents.

Italy, during the thirteenth century. Double-entry accounting is a system where every movement is written twice in credit and in debit columns, something very different from the ancient distinction between receipts and expenditure.<sup>93</sup> The accounts did not record the phenomenon of amortization, and they could not therefore be used to evaluate a property.<sup>94</sup> De Ste Croix saw all these signs as evidence that bookkeeping was not used to make decisions about economic performance, but only to exercise control over the work of the managers, and this would have been especially true in big business ventures: bookkeeping techniques did not allow one to manage economic matters in a rational way.<sup>95</sup> Finley ensured wide circulation of this interpretation and talked of the 'inadequacy of the accounting technique' for decision-taking in ancient times.<sup>96</sup> Later in *Further Thoughts*, included in the second edition of his *Ancient Economy*, he underlined this point even more clearly: 'Greco-Roman bookkeeping was exceedingly rudimentary, essentially restricted to a listing of receipts and expenditures, from which it was impossible to determine the profitability or otherwise of any single activity in polyculture.'<sup>97</sup> In terms of the data, de Ste Croix's theories were quickly revised. Richard MacVe, a specialist in the history of accounting, showed that the absence of double-entry bookkeeping did not in itself have such significant consequences as had been believed, and that this kind of bookkeeping was not, in any case, much more adapted to rational decision-making in management. Decisions about the rational accounting of Greek landowners had, he concluded, to be evaluated by means other than examining account books.<sup>98</sup>

The most radical doubts concerning 'primitivist' interpretations of ancient bookkeeping comes from an attentive re-examination of Egyptian archives after the period that is of interest to us. Dominic Rathbone, in studying the archives of a large property owner in the third century AD Fayum (managed by the bailiff Heroninos on behalf of Appianus, a member of the equestrian order), highlighted the extreme complexity of his accounts. For him, the main function of Heroninos' bookkeeping 'was to provide a check against carelessness or dishonesty on the part of the *phrontistai*', but he also came to the conclusion that it offered the possibility of managerial decision-making.<sup>99</sup> It had never been claimed that Greek and Roman bookkeeping techniques

<sup>93</sup> Minaud 2005: 37–43. On the absence of double entry bookkeeping, see already Grier 1934: 7.

<sup>94</sup> Minaud 2005a: 233–40. Minaud 2005b: 274.

<sup>95</sup> De Ste. Croix 1956: 37–38, a passage that takes up again the arguments and conclusions of Mickwitz.

<sup>96</sup> Finley<sup>2</sup> 110–11, 201 (n. 43), 142.

<sup>97</sup> Ibid. 181.

<sup>98</sup> MacVe 1985.

<sup>99</sup> Rathbone 1991: 331–87 (citation p. 371).

were elaborate.<sup>100</sup> A fundamental revision of all of de Ste Croix's assertions is therefore necessary. The passage where, for example, he refers to the absence of what he calls a 'bilateral form' of accounting, that is to say, the habit of presenting receipts on one page and expenditure on another, is contradicted by a large body of data.<sup>101</sup> In the final stage, that of the ledger, the separation is clear and obvious. Receipts and expenditures are classified in two clearly separated columns and the strictly chronological recording of entries is characteristic of another kind of document, which is the journal.

There continue to be no grounds for claiming practices in Antiquity analogous to double-entry bookkeeping. The highly technical nature of bookkeeping in ancient times does not necessarily mean that we must revise the aims that had been ascribed to it. On this point, however, Rathbone's interpretation has not convinced this reader.<sup>102</sup> Be that as it may, the function of control has always been a priority in keeping accounts, as Rathbone willingly concedes. Recently, yet another document has appeared that throws light on this topic. The book in question is the Kellis account book, dating from the fourth century AD, and comes also from Egypt. The accounts are presented in a synthesized, annual form, where a listing by foodstuff is preferred. Everything about the recording methods suggests that it is not the transactions themselves that are detailed, but that the terms have been used as a form of annual control by the owner.<sup>103</sup> Such annual accounts must have existed in Zenon's archives, but as they had been sent to the *dioikētēs* Apollonios, in Alexandria, the archives did not keep a record of them, as they had done for all the bookkeeping done beforehand.

The importance of having to render accounts is fundamental to the relationship between owners and bailiffs. It was surely as a means of explaining his actions that Zenon of Kaunos kept accounts that are so well developed. Undoubtedly many landowners were not sufficiently well-off to spare themselves from examining their overseer's accounts.<sup>104</sup> Wealthier men could pay for the services of a businessman, who examined their overseer's accounts for them. In the *dorea* of the Hellenistic period, the rendering of accounts had perhaps been organized according to a civic and royal model. The *dioikētēs* Apollonios had at its disposal experts in the matter, the king's *eklogistai*—who were in any case under his orders. He could have asked them to examine

<sup>100</sup> See also the recent study of Roman accounting by Minaud 2005a, in a book where, unfortunately, the author has not paid enough attention to Greek papyrological evidence.

<sup>101</sup> De Ste. Croix 1956: 19–21, and 26.

<sup>102</sup> For example: Andreau and Maucourant 1999: 94.

<sup>103</sup> Bagnall 1997. For interpretation of the bookkeeping part, see Andreau 2004a.

<sup>104</sup> This task of examining the accounts was undoubtedly experienced as a real drudge by certain landowners. See, for the imperial period, Plut. *Mor.*, 7.526e. We see the same reaction from Plin. *Ep.* 4.41.8. The act of rendering account by the *oikonomos* is also used in a parable by Luke 16.

Zenon's accounts and those of his other servants. The presence of an *eklogistēs* in the service of Archaios the Elder, next to Banabelos the *oikonomōn* can be explained in this way.

The accounts of sanctuaries and cities provide important examples of private bookkeeping. Those of the *hieropoioi* in Delos, for example, when the island formed an independent city, adopted a presentation in two parts. The *hieropoioi* first announced the sum they had received from their predecessors at the beginning of the year, then drew up a list of receipts for the sanctuary. They then recorded expenditures. In any account the list ends with the total for receipts (*kephalaion*), for expenditures, and the balance of both.<sup>105</sup> The account of Delos' *hieropoioi* in 250 BC presents a balance strictly equal to 79,407 drachmas, 3 obols and 1 *chalkous* for receipts, and exactly the same amount of money spent or transmitted to the *hieropoioi* of the next year.<sup>106</sup> It is not of course a question of a two-part account book, but the equivalent of what the Romans called the *Tabula accepti et expensi*, a sort of ledger where the classification is not chronological but thematic.<sup>107</sup> The engraved accounts can certainly be said to represent the final stage of an entire accounting process, completed prior to this act, and which have left only slight traces in Delian epigraphic documentation. It evokes nonetheless the monthly accounts displayed on the agora of the city, for which officials had to buy a tablet whitened with lime (*leukoma*).<sup>108</sup> In terms of bookkeeping typology, those of the *hieropoioi* situate themselves decidedly above Zenon's daily accounts. They represent a synthesis of all of the previous material. Herein lies the main challenge of surviving accounting information from ancient Greece. On the one hand, we have private accounts on papyrus, displaying daily bookkeeping and accounts, but no synthesis. On the other hand, the inscribed accounts of the cities and sanctuaries reveal only the annual synthesis, not the accounts.<sup>109</sup> In order to have a good understanding of the whole bookkeeping process, it is essential to use these two groups of sources at the same time.

The accounts from Delos indicate another possible function for bookkeeping that does not refer exclusively to control. The procedures ensured that the management of the sanctuary was healthy and was not leading to a deficit. By comparing the accounts from one year to the next, it was possible to record the evolution of the sanctuary's wealth, insofar as it escaped amortization. The farmers on Apollonios' agricultural estates were expected to give an account of the number of vines growing on the land that they took on for rent. The accounts of private individuals could also play this role, to ensure that they did

<sup>105</sup> See for instance some of the best preserved accounts: Prêtre 2002: 59–193 (and 241–2 about the accounting system used by the Delian magistrate).

<sup>106</sup> *JG* XI.2, 287 A, lines 198–200 (Prêtre 2002: 98).

<sup>107</sup> Minaud 2005: 37.

<sup>108</sup> *JG* XI.2, 161 A, line 89 (Prêtre 2002: 62).

<sup>109</sup> For Rome, see Minaud 2005a: 55–6.

not spend more than was reasonable. An account in deficit surely would have encouraged the master to make certain changes in the management of his financial situation. Decision-making of course remained empirical, but book-keeping could have been one of the tools of this empiricism.<sup>110</sup> There is one other key element in the development of private accountancy, namely that concerning the link between accounts and taxation. In a city such as Athens, the imposition of an *eisphora* tax required a citizen to submit to a declaration of his private wealth.

The overall impression is of continuity in certain fundamental practices from the Classical period up until the end of Antiquity. The broad outlines of bookkeeping practice are certainly well attested in the fourth century BC but perhaps go back still further in time.<sup>111</sup> This is undoubtedly another demonstration of the Athenian 'oikonomic' revolution. Many unanswered questions remain, not for lack of evidence, but because the subject has been neglected by scholars. One problem for future research concerns the origins of bookkeeping practices; what role did the keeping of accounts by magistrates in Classical cities play? What was the role of bookkeeping in wealthy sanctuaries? In other words, did progress in accountancy come from cities, sanctuaries, or from private individuals? All these are possible contenders. Another problem concerns the evolution of accounting techniques; the purpose of private accounts is not unrelated to that of public accounts. The Greek vocabulary suggests a close relationship in terms of usage.<sup>112</sup> Zenon's accounts show that the procedures followed by the servant of Apollonios had their roots in mainland Greece.<sup>113</sup> One specific example of this relationship in accounting practices comes from the Athenian deme of Halai Axonides, where, in the fourth century BC, the magistrates deposited monthly accounts that record expenditures and receipts. The same monthly rhythm was also used by two small cities in central Greece, Myania and Hypnia, which, at the beginning of the second century BC, required their magistrates to deposit accounts every month.<sup>114</sup> The last example is from Delos in the time of its independence from Athens, where the *hieropoioi* who managed the sanctuary's land had to put up their monthly accounts in the agora on a whitened board.<sup>115</sup> The passages from Xenophon cited earlier show that the monthly rhythm was an important characteristic of private accounting from the fourth century BC, and continued to be the norm in Egypt at least until the third century AD.

<sup>110</sup> On this function of accountancy in the Roman world, see Minaud 2005a: 106–113.

<sup>111</sup> The use of writing for accounting purposes goes back, in Greece, to the era of Mycenaean palaces at least, where clay tablets reflect a precocious system of recording.

<sup>112</sup> Study of this vocabulary: Fröhlich 2004: 53–74.

<sup>113</sup> Grier 1934: 56–7.

<sup>114</sup> Halai: IG II<sup>2</sup>, 1174, lines 4–7. Myania and Hypnia: Bousquet 1965: 667, col. III, lines 13–14. See Fröhlich 2004: 268–71, 347, 412–13.

<sup>115</sup> Vial 1984: 102.

Why did cities need the magistrates who managed their wealth, and those of sanctuaries, to have an accounting system?<sup>116</sup> One reason was to enable citizens to keep a check on the men to whom part of the state's power of decision-making had been transferred, so as to verify their honesty.<sup>117</sup> For Pierre Fröhlich, the motive was to check the consistency and integrity of transactions, rather than to validate management as a whole.<sup>118</sup> *Pistis* and *fides* are also the key words that express the qualities that one expects of overseers, as much in the Greek *okonomikoi logoi*, as in Latin treatises on agriculture.<sup>119</sup> There is considerable conceptual stability in these concepts, from the fourth century BC and throughout the first two centuries of our era. The controlling function in accounts is therefore obvious. That they were not used consciously in economic decision-making takes nothing away from their complexity.<sup>120</sup>

## CONCLUSION

The pre-eminence of agriculture over all other economical activities has been repeated for many years, at the risk of losing the force of its impact. For a long time scholars believed that the overwhelming role of agriculture was related to the idea that routine activities predominated, and that producers aimed only at being self-sufficient. This interpretation was abandoned about twenty years ago, and the capacities of agricultural producers for flexibility and dynamism have been re-evaluated. This has made it necessary to open up the debate about the importance of agriculture in economic life as a whole. Because land was the main form of wealth, ancient taxation was organized around this. The

<sup>116</sup> This question is obviously very different from another which asks why the cities sometimes had the accounts of their magistrates engraved. With regard to the accounts of Delos' *hieropoioi* see also Chankowski in Prêtre 2002: 242, 'Elle manifestait aussi l'intégrité de leur gestion'. Cf. Chankowski 2008: 323–4, on the organisation of the Delian accounts. The debate about the functions of the engraved accounts has gone on since Jacques Tréheux's reflections: Fröhlich 2004: 325–8.

<sup>117</sup> Such is Aristotle's interpretation as in *Politics*, for example, 2. 9.26, 1271a 3–6. See Fröhlich 2004: 33–52.

<sup>118</sup> Fröhlich 2004: 413. Linders 1992:73, had made the same remarks about Delos' *hieropoioi*.

<sup>119</sup> Bresson and Bresson 2004: 92. On the purpose of accountancy in ancient times, they summarize: 'contrôler le montant d'une richesse accumulée' (to control the balance of accumulated revenues) and 'contrôler l'honnêteté des opérateurs, libres ou esclaves' (to control the honesty of operatives, free or slaves).

<sup>120</sup> A 'rational' Graeco-Roman economy might have appeared without the introduction of double-entry bookkeeping. At all events, it was an empirical rationality, adapted to one essential characteristic of contemporary economies, which relied on the juxtaposition of two sectors operating in close collaboration, namely the productive and the market sectors. The purpose of bookkeeping was to control the movement of commodities from one sector to the other. This is the conclusion of the article by Bresson and Bresson 2004.



taxing of land (or cattle) as capital served as the foundation for levying taxes.<sup>121</sup>

Having briefly surveyed how managers were employed in large business ventures, and how such experts used a well-developed system of accounting, a number of conclusions can be drawn. Big agricultural enterprises undoubtedly constituted the largest scale of business ventures known in pre-Imperial times. Perhaps only money-lending constituted enterprise opportunities of a comparable scale, but without the social deference traditionally associated with landed wealth. It is therefore inappropriate to look towards artisan workshops in order to find the kinds of production teams that employed qualified staff, elaborate management techniques, and a diversified workforce. Concentrating attention on industrial workshops involves a conscious refusal to look at the real heart of ancient economies. In order to understand what the fulcrum, the driver of ancient economic activity really was, we must accept that ancient economies were agrarian, that they were built upon agriculture. There is no way around this fact, no point in trying to trace an evolution of autonomous crafts and of exchange practices, in order to maintain the spurious idea of Antiquity's supposed precocious development. But the implications of this conclusion provide no justification whatever for the kinds of judgements of ancient agricultural exploitation that have often been made in the past, on the implicit assumption that it was uniformly unchanging, routine-driven, and backward-looking.<sup>122</sup> In reality there was a good deal of variety in agricultural experience. There were no doubt instances that did correspond to the traditional image; but equally there were others that demonstrated a capacity to evolve more complex organizational structures. The extent to which land plots may have been concentrated in the second half of the first millennium BC, to form large estates, is of course debatable; but the existence of the process cannot be denied. There is no evidence that could indicate a comparable evolution of artisans' workshops in the Hellenistic period. Furthermore, other economic activities also had large estates as their starting point: craft production units, transportation systems, and credit. It is therefore not surprising to find that such enterprises became the engines that generated complex systems of management and were responsible for instigating strategies that really were different. An agrarian economy need not be viewed as a primitive one.

To conclude, we should consider whether the agrarian economies of the Hellenistic age had any distinctive characteristics in respect of the two topics examined above. If we look for decisive changes, it has to be admitted that such developments cannot be identified, either at the start of the period, nor in

<sup>121</sup> MacVe 1985: 239.

<sup>122</sup> Bresson and Bresson 2004: 99 conclude that : 'l'économie domaniale esclavagiste pouvait se révéler performante' (a slave-owning estate economy could be demonstrably productive).

its later stages. Innovation involved the emergence of managers, recourse to complex accounting systems, and the opening of specific agricultural processes to sale in markets. These forms of innovation first become visible in the final quarter of the fifth century BC at the latest, in Athens, if we ignore the kinds of stewardship practised on aristocratic estates of the archaic age. In the Hellenistic period, such practices were simply developed more widely. Modifications doubtless occurred in terms of applied practice. The systems of financial management adopted by civic and Hellenistic royal authorities probably affected in turn the procedures adopted by large landowners. This sort of development probably explains why the Attic word *epitropos* was superseded by other terms, such as *oikonomos*, to describe the manager of a large estate. It is equally possible that the adoption of these kinds of accounting and management procedures resulted in some degree of technical progress. This is difficult to demonstrate on the basis of current research. We have no estate accounts dating from the Classical period, and Ptolemaic archives from Egypt have not, as yet, been investigated to allow comparisons to be made with later accounts. The *doreai* in Hellenistic kingdoms and the trend towards larger property units, could have led to quantifiable progress. Such factors could also explain why managers of large Hellenistic estates were not necessarily slaves, as they had been in Classical times, and sometimes even enjoyed social distinction. It is probably in the scale of agricultural exploitation that we should seek specific developmental characteristics, in comparison with what went before. Other modifications would have emerged on that basis.

The proposition that deserves most emphasis is that periodization is less important to understanding ancient agricultural history than the central role of agriculture itself in economic life. The degree to which agricultural practices had the capacity to adapt determined, in turn, rates of development and an openness to markets.

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# The Impact of War on the Economy of Hellenistic *Poleis*: Demand Creation, Short-Term Influences, Long-Term Impacts

ANGELOS CHANIOTIS

## 1. INTRODUCTION

An honorific decree for a benefactor of Sestos describes in a very dramatic way the situation the city was facing towards the end of the second century:<sup>1</sup>

We had been worn out for many years because of the incursions of the Thracians and the wars which were engulfing the city, in the course of which everything in the fields had been carried off, most of the land was not sown, and the dearth of crops which recurred continuously reduced the people publicly and every individual citizen privately to penury.

We do not have to take any of this at face value. The expressions ‘*many* years’ and ‘*most* of the land’ are too vague, and that ‘*everything* in the fields had been carried off’ or that *all* the citizens were impoverished clearly are exaggerations. Consequently, to believe in the general impoverishment of the community and of every single citizen would be jumping to conclusions and ignoring both the interest of Hellenistic authors and readers in the description of unexpected rescues and a common strategy of persuasion applied in Hellenistic decrees: one minimises the abilities of a community in order to maximise the contribution expected by a local or foreign benefactor. The decree of Sestos taken by itself cannot serve as evidence for the impact of war on the economy of the Hellenistic *poleis*; the only quantitative information it provides is limited to the vague expressions ‘many’, ‘most’, ‘everything’. This document, often

<sup>1</sup> OGIS 339; *I.Sestos* 1.

quoted in studies on war, euergetism, and the gymnasium, is paradigmatic for one of the problems connected with the study of the Hellenistic economy—in indeed of the ancient economy—in general: the extremely limited possibilities to support our conclusions with quantitative studies. A general picture is put together not with the help of statistical data, but of impressions.

Impressions are not always wrong, whereas numbers sometimes lie. Despite the rather limited quantitative data we can collect for a very long and very diverse historical period, at least some general trends can be recognized. The conclusion that war had a negligible impact on the economy of Sestos or any other Hellenistic community exposed for a longer period of time to foreign incursions, engaged in a regional conflict against a neighbour, or drawn into one of the countless wars of the kings and the great powers, would be as wrong as drawing any general conclusions from the decree of Sestos (or from any other decree for that matter). Taking into consideration the general theme of this volume, I shall not attempt a general survey of how war affected the Hellenistic economy,<sup>2</sup> but I will rather focus on three specific questions:

1. In what sense did Hellenistic warfare create economic demands?
2. How did Greek *poleis* respond to these demands?
3. How did the economy of the *poleis* adjust itself to the impact of war?

My focus will be on the world of the *poleis*, not the Hellenistic monarchies.

## 2. IN WHAT SENSE DID HELLENISTIC WARFARE CREATE ECONOMIC DEMANDS?

Hellenistic warfare is a very diverse phenomenon, comprising a large variety of military conflicts, skirmishes, ambushes and battles, sieges and raids, planned campaigns, seasonal conflicts at the border of a community, foreign incursions, and civil wars. Regardless of the type of the conflict, war creates demands that concern manpower, food, and equipment. War also means increased demand for cash, for the payment of mercenaries, the ransoming of captives, etc.<sup>2</sup> Even if the size and complexity of the demands, and the possibilities of a community to meet them, differ from situation to situation, the demands during wars increase and the possibilities to meet them decrease.

<sup>2</sup> See Migeotte 2000 and 2008; Chaniotis 2005a: 115–42.

## Manpower

The overrepresentation of mercenaries in our sources—especially with respect to the royal armies—may create the impression that Hellenistic warfare was primarily the job of professional soldiers.<sup>3</sup> Although the Hellenistic cities certainly employed mercenaries, they continued to rely on citizens too and placed a lot of emphasis on the military training of the young men (*ephebeia*).<sup>4</sup> Hellenistic cities maintained a standing army—naturally, of varying strengths –, the primary duties of which were patrolling the frontier and manning the forts. This army was of mixed origin, consisting of ephebes, citizen soldiers, and mercenaries. Its organization and its payment was subject to more or less fixed rules, as we may infer from documents regulating the military training of the ephebes or services in forts and garrisons.<sup>5</sup> For instance the expression *ἡ κατὰ γράμμα φυλακή*, which refers to the assignment of citizen subdivisions to specific garrison and guard duties, presupposes the existence of an institutionalized service governed by strict rules.<sup>6</sup> Demand for this kind of manpower was subject to standardization. It is the extraordinary and increased demands on manpower that could have dramatic effects on the economy of a city. Let us take the case of Athens, whose countryside repeatedly suffered during the wars of Demetrios Poliorketes and Antigonos Gonatas in the third century.<sup>7</sup> In 248/7 BC the Athenians were concerned with the safe transportation of the agricultural products of Attika to the city. They raised between 24,000 and 36,000 drachmas in order to fund troops to protect the transportation. If we estimate a wage of one drachma for each soldier *per diem*, with this amount the Athenians could have paid 800 (or more) men for a month.<sup>8</sup> This source is a good example of the problems of our documentation. We do not know if this was an isolated

<sup>3</sup> Mercenaries in the Hellenistic period: Ducrey 1970; Pritchett 1974: 59–116; Petropoulou 1985: 15–31; Launey 1987; Foulon 1996; Baker 1999; Sion-Jenkins 2001; Chaniotis 2002; Couvenhes 2004; Chaniotis 2005a: 78–96; Loman 2005; Couvenhes 2006; Lendon 2007, 498–500, 502 f.

<sup>4</sup> Citizen militias in the Hellenistic cities: Ma 2000; Baker 2001a and 2001b; Labarre 2004; Chaniotis 2005a: 20–6, 41–2; Chaniotis 2008a. Sparta: Cartledge and Spawforth 1989: 38–58. Boiotia: Feyel 1942: 187–218. Black Sea: Avram 2005. Military aspects of Hellenistic *ephebeia*: Gauthier and Hatzopoulos 1993: 173 f.; Burckhardt 2004; Chankowski 2004; Kah 2004; D'Amore 2007; Oliver 2007: 175 f.

<sup>5</sup> On the *ephebeia* see n. 4. On the organization of garrison service see Labarre 2004.

<sup>6</sup> *Syll.* <sup>3</sup> 569. 21; 614. 79. Cf. the division of cities into wards assigned to subdivisions of the citizen-body (Garlan 1973: 20–2) and regulations concerning service in the fort of Kyrbissos: *SEG* XXVI 1306 with the commentary of Robert and Robert 1976.

<sup>7</sup> Oliver 2007: 113–37.

<sup>8</sup> *IG* II<sup>2</sup> 791 + *SEG* XXXII 118; Migeotte 1992: 340 f.; Oliver 2007: 132 f. and 200–4. If the money was to be spent also on provisions, the number of men would have been smaller.

measure; we do not know if there was information about an imminent danger, as at Olbia in the late third century;<sup>9</sup> we have no information concerning the origin of these soldiers. This expenditure was of an extraordinary nature, as most war expenses are. There was no regular budget for this task, as there was one for other defence purposes, e.g. for fortification works (see below, n. 64). To procure the money was, however, only one side of the problem; to find the manpower needed was the other. Despite the notorious lack of reliable information on demographic changes in the Hellenistic *poleis*, the general impression is that many cities, including Athens, suffered from a decline of population caused by war and migration.<sup>10</sup>

More manpower was needed during a war than in peacetime: to defend the city, to secure the harvest in the countryside, to man forts, to participate in campaigns, to patrol the frontier. Some of the troops were provided by the citizen-body, but the ancient manuals on military tactics and technology take the presence for mercenaries for granted.<sup>11</sup> The numerous garrison inscriptions from Attika suggest mixed troops consisting of citizens and mercenaries.<sup>12</sup> Statistical data are, again, not available, but treaties of alliance between cities make provisions for the sending of troops that had to be transported, paid, and provided with food.<sup>13</sup> These expenses could be a heavy burden; for instance Samothrake had a hard time in procuring the money to pay the mercenaries who manned a fort, and had to raise loans (c.240–220).<sup>14</sup>

An additional problem as regards the employment of additional manpower is that the Hellenistic cities had to compete not only with one another, but also with much more privileged potential employers: with the kings, who not only had more funds to pay mercenaries, but also better possibilities to provide them with land, that is to turn them to military settlers.<sup>15</sup> Hellenistic cities were rarely in a position to provide land to ‘military settlers’, as Miletos did in the late third century, when it invited Cretan mercenaries to settle in newly-acquired territory.<sup>16</sup>

<sup>9</sup> IOSPE I<sup>2</sup> 32 B 1–32; see Müller, this volume.

<sup>10</sup> For Hellenistic Athens, see the cautious assessment by Oliver 2007: 76–100, esp. 89 f., 94, 109 f.

<sup>11</sup> e.g. Philo, *Mechanics* C 45 ed. Garlan 1974.

<sup>12</sup> Oliver 2007: 107, 184, and 274–6. Mercenary cavalrymen in Athens: Oliver 2007: 88 f.; SEG XLVI 167.

<sup>13</sup> e.g. *Staatsverträge* 581.

<sup>14</sup> IG XII.8. 156 = *Emprunt* 235–8 no. 68.

<sup>15</sup> Military settlers in Ptolemaic Egypt: Préaux: 400–3 and 463–77; Uebel 1968; Van t’ Dack 1977; in the Seleucid Kingdom: Cohen 1978: 45–71. Cf. Chaniotis, 2005a: 84–6.

<sup>16</sup> *Milet* I.3.33–38; Chaniotis 2005a: 84.



## Provisions

War means increased demand for food commodities, both during and after the war. The existing resources had to be used to feed a parasitical population, parasitical in as much as it did not actively participate in production: the citizen militias, allied troops, and additionally hired mercenaries. The inhabitants of Krannon for example fed Roman troops and were afterwards left financially ruined.<sup>17</sup> The settlements of the countryside often faced the burden of the billeting of soldiers.<sup>18</sup> Also the invading army needed to be fed, and since the possibilities for carrying food during a campaign were limited, these troops subsisted on the surplus of the invaded state.<sup>19</sup> A contract for the leasing of a piece of land in Attika mentions 'an invasion of enemies or the camping of friendly troops' as a possible cause of problems in its exploitation.<sup>20</sup> Not only men needed food. War increases the demand on food for horses, and the inhabitants of Rhamnous regarded it important to mention in honorary decrees for Athenian generals that they had fed the watchdogs in the fortress at their own expense.<sup>21</sup>

War means also interruption or disruption of trade—especially of the transportation of food commodities—, sometimes it means the loss of harbours. Athens, for which we have sufficient information for long periods of time, is a good example of how war, invasions, limited access to harbour facilities, and the temporary or permanent loss of territory and cleruchies, affected food supply and caused higher prices of food commodities.<sup>22</sup> Finally, war means loss of revenues and, consequently, limited possibilities of a *polis* to subsidize the purchase of cheap grain using public funds.<sup>23</sup> The difficulties continued in the aftermath of a war, because of the loss of harvest.<sup>24</sup>

Some doubts have been expressed on the impact of war on agriculture.<sup>25</sup> It has been pointed out that the destructive effect of wars on agriculture was to some extent limited by the fact that fragmented holdings were the norm in ancient Greece. A landowner usually owned rather small fields, widely

<sup>17</sup> Migeotte 1992: 93–6 no. 34.

<sup>18</sup> Launey 1987: 695–713; Chaniotis 2005a: 124 f. E.g., SEG XXIV 154; XXIX 1516 and 1613; SEG XXXVII 1003; *ILabraunda* 46; RC 30.

<sup>19</sup> e.g. Polyb. 21.1.14; Philo, *Mechanics* D 87 and 90 f. ed. Garlan 1974.

<sup>20</sup> IG II<sup>2</sup> 1241 lines 15 f.; cf. Launey 1987: 692. The Romans demanded grain from Gytheion during the war of Marcus Antonius Creticus (74–71 BC); IG V.1.1146 = *Emprunt* 90–6 no. 24.

<sup>21</sup> Petrakos 1999: 2–9 no. 3 (SEG XXIV 154), 22 no. 16 (SEG XLI 76).

<sup>22</sup> Oliver 2007 *passim*, esp. 53 f., 69 f., 109 f.

<sup>23</sup> See e.g. the situation in third-century Athens: Oliver 2007: 49–68, esp. 64 f. For *sitōnia* see n. 62 below.

<sup>24</sup> e.g. IG II<sup>2</sup> 834 lines 7 f.: [τῆς χώρας κατὰ] τοὺς πολέμους ἀργοῦ καὶ ἀσπόρου οὐσης; *Milet* I.3.141 lines 25f.: τεθλίφθαι διὰ τοὺς πολέμους καὶ τὰς ἀφορίας τὰς κατασχούσας τὴν χώραν; SEG XXXVII 859 lines 12–14: ὑπὲρ τῆς γεγεννημένης στενοχω[ρία]ς περὶ τὴν πόλιν ἐκ τῶν ἐπάνω χρόνων διὰ τοὺς πολέμους καὶ τὰς κα[ταφθ]οράς (Herakleia on the Latmos). See also notes 1 and 34.

<sup>25</sup> Hanson 1982 (2 edn.: Hanson 1998); Foxhall 1993.

distributed over the territory; therefore, an invasion usually affected the holdings of a particular area, causing many farmers to lose only part of their produce. It has also been observed that the burning of grain on a large scale is not very easy, and that the destruction of other crops (e.g. olive trees, which are usually on hills) requires a lot of effort. Although such considerations are valid, there is enough evidence, both in the Classical and the Hellenistic period, for the disastrous effect of warfare on agricultural production and on access to food commodities.<sup>26</sup> In particular, repeated attacks on crops threatened a city's food supply. The weight of collateral damage, in particular damage to agricultural infrastructure and manpower, should not be underestimated. The impact of war on agriculture and food supply depended, of course, on a variety of parameters, such as the duration of war activities, the resources of a city, its protection through a king, the willingness of benefactors to help with a loan or a donation, the structure of the territory, and the type of agricultural production.

In general, the countryside was the greatest victim of wars. It was the place where battles and skirmishes took place; it fed both enemy and friendly armies and was intentionally devastated by the enemy.<sup>27</sup> An invading army destroyed at least part of the production, damaged the fields and the farms, stole the gathered surplus to feed itself and to use as fodder for the horses and the draft animals, burned down buildings, and stole livestock. Agricultural activities were interrupted and suffered a loss of labour: the farmers abandoned the countryside either because the men had to fight, defending their land or devastating the land of a neighbour, or because they sought security behind the city walls.<sup>28</sup> In most cases these were temporary problems, but if a conflict turned out to be lengthy, the fields were completely abandoned. The citizens of Elateia had to abandon their city and live for eight years as fugitives in Stymphalos (c.198–190).<sup>29</sup> Although massacres of the populations of sacked cities seem to have been uncommon in Hellenistic Greece,<sup>30</sup> war always causes death, and the famous correspondence between Philip V and the city of Larisa refers to the lack of manpower precisely 'because of the wars'.<sup>31</sup> There was also a loss of slave labour, as the un-free population had an opportunity to escape.<sup>32</sup> In addition to the casualties of battles, slaves and free persons were

<sup>26</sup> Classical period: Thorne 2001; Hellenistic period: Chandezon 2000; Chaniotis 2005a: 121–9; Oliver 2007: 113–37; Walser 2008: 273–80.

<sup>27</sup> For examples see Chaniotis 2005a: 123 f., 141. Cf. honorary decrees for officers, who prevented devastations of the countryside: e.g. *IG* II<sup>2</sup> 1225 lines 9 f.; 1260, 1299 lines 66–7.

<sup>28</sup> e.g. *I.Priene* 18 = Bielman 86–90 no. 22 lines 22–4, 35–7 (Priene, after 278/77 bc).

<sup>29</sup> *SEG* XI 1107.

<sup>30</sup> Pritchett 1991: 218 f.; cf. Ducrey 1999: 56–74.

<sup>31</sup> *Syll.* <sup>3</sup> 543.

<sup>32</sup> See the measures taken concerning runaway slaves after the war between Miletos and Herakleia under Latmos (early second century): *Milet* I.3.150; recent discussions (with the earlier

frequently captured in the countryside. When they were ransomed or freed they were a financial burden;<sup>33</sup> when they were sold abroad (especially during the wars against the Romans), they were lost for ever. If we can trust the numbers given by Polybios (4.34.9), 50,000 *perioikoi* were enslaved in Lakonia by the Aitolians during a single campaign in 240 BC. If the loss of one year's harvest could somehow be compensated, manpower was harder to replace, the destruction of infrastructure could be substantial, and the abandonment of the countryside could become endemic. Even if we take into consideration the exaggerations of ancient sources—the rhetoric of praise, complaint, and pity—the financial and fiscal misery and the abandoned landscapes that are often lamented were not imaginary.<sup>34</sup>

The long-term impact of war on agriculture should also not be underestimated. The maintenance of agricultural terraces, required for the exploitation of the slopes of hills, was neglected;<sup>35</sup> the investment in labour for the cultivation of olive trees, vineyards, and orchards was lost. Even if the extensive destruction of olive groves required a lot of energy, since the trees were usually on hills, the cutting down or burning of a single grown tree, for whose fruit a farmer had waited seven years and had invested labour, meant the loss of a yield of 20 kg of olive oil every second year, which roughly corresponds to the annual consumption of olive oil (for food) by one person.<sup>36</sup>

War resulted in both loss of production and increased demands on food. Given all these problems, shortages of food, especially of the most important staple product, grain, were not uncommon in the Hellenistic period, although it is not always possible to date them, to recognize the historical context, and to attribute them securely to a war. At the beginning of the war between the Romans and Antiochos III (191 BC), the Achaian League imposed a prohibition against the exportation of grain, and similar measures are known (without reference to the cause) from a roughly contemporary inscription from Chorsiai.<sup>37</sup> One of the rare cases, in which the causes of food shortage are explicitly stated, concerns Arsinoe (Tokra, Kyrenaika, c.100 BC). 'During the war against the Libyans, when there was a shortage of grain' and the prices were rising, the donation of a citizen made the purchase of cheap grain and its

bibliography): Brélaz 2005: 162; Chaniotis 2008a: 139–41. For Athens, see Oliver 2007: 98 f. For Theangela (c.310 BC), see *Staatsverträge* 429.

<sup>33</sup> The material has been collected and discussed by Bielman 18–227 nos. 6–67.

<sup>34</sup> Complaints about the impact of war on economy in contemporary epigraphic documents: *Syll.*<sup>3</sup> 543 (Larisa, late third century); *Milet* I.3.141 (Kios and Miletos, late third century); Étienne and Knoepfler 1976: 163–6, 244–5 (Hyettos, c.150 BC); Migeotte 1992: 93–6 no. 34 (Krannon, mid-second century); *OGIS* 339 lines 54–64 (Sestos, late second century). See also n. 1 and 24.

<sup>35</sup> Chaniotis 2005a: 127; on agricultural terraces see Price and Nixon 2005; Foxhall 2007: 121–4.

<sup>36</sup> On these estimates see Amouretti 1986: 183 and 203; Foxhall 2007: 85–91.

<sup>37</sup> *SEG* XI 1107 lines 15–16: οὐκ οὔσα[ς σ]ίτου ἀ[π]αγωγᾶς τοῖς Ἀχαιοῖς διὰ τὸν περισσ[τῶτα] πόλεμον καὶ τὴν σ[ι]τοδείαν. Chorsiai: *ISE* 46.

transportation from Leptis to Arsinoe possible.<sup>38</sup> The wars of the early second century are very likely the ultimate cause of the 'lack of grain' (σπανοσιτία), which affected Gonnoi in Thessaly (c.180–169 BC).<sup>39</sup> Often, we are informed about food shortages indirectly. When a king or a citizen made a donation of grain,<sup>40</sup> when citizens, magistrates, or traders were praised for having supplied grain at reasonable prices,<sup>41</sup> and when a city took measures for the purchase of grain,<sup>42</sup> we may assume that a city was facing a shortage either of grain or of *cheap* grain—or that it had learned from past experience.

The increased demands could sometimes be met using stored food, but usually additional food commodities had to be imported. And exactly this is the problem: war also. Naval warfare and the raids of pirates, which frequently occurred during wars, disrupted trade activities and affected food trade no less than other forms of trade.<sup>43</sup> Bold merchants could still be engaged in this risky enterprise. The execution by Demetrios Poliorketes of a ship's helmsman and a merchant, who attempted to bring grain to Athens during the siege of 295 BC, was a rare measure, but an effective one:<sup>44</sup> 'after that, all ships turned away in fear, food shortage in the city became acute, and, in addition to the shortage of food, there was a lack of other things too.' We may infer the impact of war on trade from honorary decrees for individuals, who had contributed to the safety of merchant ships. For example, Archestratos of Macedon, an officer of Demetrios Poliorketes, was honoured in Ephesos for protecting ships that transported grain to the city during a war (c.302 BC).<sup>45</sup> An inscription at Erythrai (c.277 BC) explicitly regards the abundance of food as the result of the efforts of a wealthy citizen to provide safety to traders.<sup>46</sup>

## Equipment

War generated also increased demands of equipment, from the weapons and armour of the citizens, horses for the cavalry, and pack animals, to the material

<sup>38</sup> SEG XXVI 1817 lines 33–54. Cf. the situation in Entella in the early third century: SEG XXX 1121 and 1123.

<sup>39</sup> Helly 1973: 43–7 no. 41. Walsh 2000 has attributed the food shortage, which is attested in Gonnoi and in other cities of central Greece in this period, to drought or blight; see however my comments in SEG L 1694.

<sup>40</sup> Ameling et al. 1995: nos. 6, 11 f., 15 f., 27, 31 f., 34, 36, 39, 50, 76, 195 f., 203, 205, 207, 211–13, 224, 241–5, 255, 296 f., 317. For benefactors in Athens in connection with food supply see Oliver 2007: 213–23, 228–55.

<sup>41</sup> e.g. IG VII 4262 = *I.Oropos* 210 (Oropos, c.190–180); *ISE* 66 (Chorsiai, early second century).

<sup>42</sup> IG VII 1719: *σιτῶναι* in Thisbe (c.191–150). See below, n. 62.

<sup>43</sup> Chaniotis 2005a: 129; for Rhodes' efforts to limit piracy, see Wiemer 2002.

<sup>44</sup> Plut. *Demetrios* 33.3; Oliver 2007: 65.

<sup>45</sup> *I.Ephesos* 1452; Walser 2008: 65 f., 307 f.

<sup>46</sup> *I.Erythrai* 28.

for the construction of ships or city walls. In general, citizens were expected to supply their own weapons. However, extraordinary situations obliged a city to call on the less well off and provide them with weapons (a shield, a lance or sword, and a helmet). When weapons were not donated by a powerful patron—as for instance Philetairos donated 600 shields to Kyme around 270 BC—they had to be obtained using public funds.<sup>47</sup> Argos had to take a loan from Rhodes in order to upkeep its cavalry (early third century).<sup>48</sup>

The expenses that are best documented are those for the construction and repair of fortification walls.<sup>49</sup> For the enlargement of their city walls, the Kolophonians collected, via private contributions, more than 200,000 drachmas.<sup>50</sup> It has been estimated that the construction of a tower alone cost more than 20,000 drachmas.<sup>51</sup> In the late fourth or early third century, in a dramatic effort to procure money for the construction of a city wall the Oropians decided to use the entire public purse for the building works and the repayment of debts.<sup>52</sup> H. Tréziny has recently estimated that the costs for fortifications were lower than other military expenses,<sup>53</sup> but fortifications continued to cost money after their construction had been completed. Damage was caused not only by enemy artillery or earthquakes, but in some cases also by the native population. For example, in Selymbria, the generals punished an individual either for stealing or for illegally using timber from a fortification and a watch-tower.<sup>54</sup>

The material demands connected with the construction and maintenance of an ancient warship were manifold and high, ranging from iron and lead for the metal parts, to timber and sail-cloth, to tow, pitch, and tar.<sup>55</sup> In one instance (c.200 BC) it is reported that the daily cost of keeping a trireme in commission was 330 drachmas—which corresponds to the annual salary of a mercenary soldier—but unfortunately we do not know whether this amount corresponds to the average, is exceptionally high, or extremely low.<sup>56</sup>

Finally, a foreign attack and a long siege not only meant the temporary loss of a city's countryside with all its resources, but also sometimes substantial

<sup>47</sup> Philetairos and Kyme: *SEG* L 1195. For these shields, Kyme had allocated public funds (line 9: *εἰς δὲ τὸ ἀνάλωμα τὸ ἐσσόμενον πόρον ὑπάρχῃν τὰμ πρόσδοον τὰν [ἀ]πὸ τῷ διαγωγίμῳ σίτω;* line 22: *πόρον εἰς ταῦτα προχειρισσάμενον*). For the purchase of weapons with public funds see also *Syll.*<sup>3</sup> 363 = *I.Ephesos* 2001 = *Emprunt* 287–90 no. 89 (Ephesos); *Syll.*<sup>3</sup> 569, lines 31 f. (Kos). Cf. *IG* II<sup>2</sup> 1281 lines 5–8; Petrakos 1999: 32–4 no. 26 line 4; cf. Oliver 2007: 151 with note 49.

<sup>48</sup> *Emprunt* 81–4 no. 19 lines 10f. (*καὶ τὰν ἵππων ὡς ἀμπληρωθείη*).

<sup>49</sup> For the relevant material see Maier 1959: 48–156 nos. 11–36, 160–204 nos. 38–56, and 206–81 nos. 58–87.

<sup>50</sup> Migeotte 1992: 214–23 no. 69, and 337.

<sup>51</sup> Migeotte 1992: 106 n. 11.

<sup>52</sup> *I.Oropos* 302; *Emprunt* 35–8 no. 8.

<sup>53</sup> Tréziny 2001.

<sup>54</sup> *I.Byzantion* S 3.

<sup>55</sup> Gabrielsen 2001: 81; see e.g. the Athenian naval accounts: *IG* II<sup>2</sup> 1604–32.

<sup>56</sup> Gabrielsen 2001: 75.

destructions of the urban centre, especially as artillery devices became increasingly effective. After the siege of Rhodes by Demetrios (304 BC), the Rhodians had to rebuild parts of the city wall that had collapsed and many other buildings that had been destroyed, including the theatre.<sup>57</sup> Battles often took place in the inhabited areas of a city. When a city was actually taken the damage was more substantial. A letter sent by the inhabitants of Kytenion, in Doris in central Greece, to Xanthos in Asia Minor, eloquently describes the dimensions of the problem in this small community (206 BC):<sup>58</sup>

It so occurred that at the time when Antigonos [Doson] invaded Phokis [228 BC] part of the walls of all our cities had collapsed because of the earthquakes and the young men had gone to defend the sanctuary of Apollo in Delphi; when the king came to Doris, he destroyed the walls of all our cities and burned the houses.

This was the fate of many Hellenistic cities. The rebuilding of many a city was another generator of material demands.

### 3. HOW DID GREEK *POLEIS* RESPOND TO THESE DEMANDS?

How did Greek *poleis* respond to these demands? A song of the Beatles gives the answer: 'With a little help from my friends'. At least this is the impression one gets from the documentary sources, usually honorific decrees for benefactors. These sources reveal a predominance of external supply of manpower, equipment, food, and other commodities, usually donated by kings, sometimes by civic benefactors.<sup>59</sup> This impression is, however, determined by the nature of our epigraphic sources and is, at least in part, deceptive. The Hellenistic *poleis* had a far more complex mechanism for meeting these demands than simply begging for external assistance. Recent studies, especially by Leopold Migeotte, have demonstrated that many Greek cities had a quite sophisticated system of fiscal organization (*διοίκησις*, *μερισμός*,

<sup>57</sup> Diod. 20.100.4.

<sup>58</sup> SEG XXXVIII 1476. Other examples: Chaniotis 2005a: 140.

<sup>59</sup> Royal donations for the defence of cities: e.g. Demetrios Poliorketes: 1,200 suits of armour to Athens (Plut. *Dem.* 17.1); Ptolemy V: armour for 6,000 peltasts to the Achaean League (Polyb. 22.9.1–4; 24.6.3); Hieron II and Gelon: 50 catapults to Rhodes (Polyb. 5.88.7); financial support for the construction of the city walls of Megalopolis (Liv. 41.20.6), Melitaia (*ISE* 94; *IG* IX.2.208), Rhodes (Polyb. 5.88.5), Chios (Maier 1959: 192–5 no. 51), Gortyn (Strabo 10.4.11, C 478), and Alexandria Troas (Strabo 13.1.26, C 593); royal donations of warships (e.g. Polyb. 5.89.8, 24.6.1; 22.7.4; Diod. 29.17); timber for the construction of warships (Polyb. 25.4.10; Diod. 20.46.4; *Syll.*<sup>3</sup> 645); horses for cavalry (*OGIS* 748); mercenary soldiers (Diod. 20.88.9, 96.1, 98.1, 100.3). Contributions of benefactors: e.g. *IG* II<sup>2</sup> 554, 834; *IG* IX.2.208; *IOSPE* I<sup>2</sup> 32; SEG XXII 127 (*I.Eleusis* 191 line 18); cf. Chaniotis 2005a: 36–41; Oliver 2007: 213–23.

ἀνάταξις, διάταξις), taxes, and a 'budget' for specific purposes, including a budget for their defence.<sup>60</sup>

For demands of a more permanent nature, there were two institutionalised mechanisms of procuring funds: the liturgies and the institutionalized budget for certain tasks. The system of liturgies obliged the citizens to cover some of the expenses at the cost of their private property. In Priene for instance liturgies concerned inter alia the raising of horses (perhaps for war), the administration of the gymnasium, and the upkeep of triremes (*trierarchia*).<sup>61</sup> In several cities there existed special funds for the defence (*phylakē*), the army (*stratiōtika*), the construction and maintenance of the fortifications (*teichopoika*, *logos tēs ochyrōseōs*), the purchase of cheap corn in advance (*sitōnia*).<sup>62</sup> Some of these funds may have only existed only for the duration of a specific project and may not have had the character of a long-term budget; for instance the funds collected by the *teichopoioi* of Oropos through a loan in 221 BC must have been designated as *teichopoika*,<sup>63</sup> but they were funds for temporary use, not a permanent 'fortification budget'. In Miletos, on the other hand, we observe that the 'fortification funds' were occasionally used for the publication of honorary decrees, and from this we may infer that they were set aside as a reserve for the fortification walls, which could be used for other unexpected expenses as well.<sup>64</sup>

But many (most?) cities did not have a budget, and when a war broke out, they reacted as the Koans did during the Cretan War of the late third century; the timber 'for the needs of the war' had to be 'borrowed' from another project ('the entire civic community had borrowed for the needs of the war the timber, which existed for the construction of the stoa').<sup>65</sup> When Kyme needed shields for its citizens, it had to use the revenues from the transit trade of grain in order to cover this expense (c.280–270).<sup>66</sup> There were also irregular poll taxes

<sup>60</sup> Faraguna 1992; Migeotte 1995, 2003 and 2008; Schuler 2005; Rhodes 2007.

<sup>61</sup> *I.Priene* 174.

<sup>62</sup> See the overviews in Migeotte 2000 and 2008. I mention a few representative sources. Φυλακή: *I.Kyme* 12 lines 2–4 (τὸν ταμίαν . . . προεισενέγκαι ἐπὶ πόρῳ τοῖς πρώτοις πορισθησομένοις εἰς τὰμ φυλακὴν τὰς πόλιος). Στρατιωτικά (Athens): Faraguna 1992: 171–94; Oliver 2007: 224–6. Λόγος τῆς ὀχυρώσεως: Schuler 2005: 401; Τειχοποιϊκά: *Delphinion* 139 lines 56 f.; 146 lines 46–50. Σιτωνία: Fantasia 1989; Migeotte 1991; Oliver 2007: 255–9. Some examples: *IG VII 1719*: σιτώναι in Thisbe (c.191–150); *IG XII.6.172* (Samian law concerning grain supply).

<sup>63</sup> *Emprunt* 38–41 no. 9.

<sup>64</sup> *Delphinion* 138 line 33; 139 lines 56 f. (ἐκ τῶν τειχοποιϊκῶν); 141 lines 51–3 (τὸ δὲ ἀνάλωμα δοῦναι τοὺς ἡρημένους ἐπὶ τῇ[s] δημοσίας τραπέζῃς ἀπὸ τοῦ ὑπάρχοντος αὐτοῖς εἰς τὰ τειχοποιϊκά); 146 lines 46–50 and 147 lines 65 f. (ὑπηρετῆσαι τοὺς ἐπὶ τῆς δημοσίας τραπέζῃς ἀπὸ τῶν εἰς τὰ τειχοποιϊκὰ ἐξειρημένων); cf. 144 A 5–7. The same applies also to *λόγος τῆς ὀχυρώσεως* in Teos: Schuler 2005: 401.

<sup>65</sup> *Emprunt* 199–203 no. 58 lines 34–6 (προχρησαμένο[υ] τε τοῦ σύμπαντος δήμου τὰ ὑπάρχοντα ξύλα εἰς τὰν κατασκευὰν τὰς στοᾶς εἰς τὰς τοῦ πολέμου χρεῖας).

<sup>66</sup> *SEG L 1195* line 9: εἰς δὲ τὸ ἀνάλωμα τὸ ἐσσόμενον πόρον ὑπάρχῃν τὰμ πρόσδοτον τὰν [ἀ]πὸ τῷ διαγωγίμῳ σίτῳ.

(*telos sōmatos*), usually imposed upon citizens in times of war.<sup>67</sup> We are informed about such contributions for military purposes (*telē*) usually when someone is exempted from them. Also extraordinary taxes (*eisphorai*) were imposed from time to time.<sup>68</sup>

For unexpected and urgent demands the Hellenistic communities first relied on the patriotism of their citizens and raised funds by means of subscriptions and appeals to wealthy citizens. Citizens and foreigners, men and women, were invited to contribute to voluntary subscriptions (*epidoseis*), which provided the funds for all kinds of projects.<sup>69</sup> Defence expenses had the lion's share. Sometimes the aim is described in general terms as the 'protection of the city' (*phylakē tēs poleōs*), the 'protection of the countryside' (*phylakē tēs chōras*), the 'salvation of the city' (*sōteria tēs poleōs*), or 'the war preparation' (*paraskeuē tou polemou*),<sup>70</sup> but in most cases a specific project is explicitly stated: the construction or reconstruction of fortifications,<sup>71</sup> the protection of the agricultural produce,<sup>72</sup> the fortification of a harbour,<sup>73</sup> wages and provisions for soldiers (*misthophora*, *sitēresion*),<sup>74</sup> and the expenses for a warship.<sup>75</sup> The amounts varied from a few drachmas, which represent the earnings of a worker for roughly ten days, to extremely high amounts (e.g. more than 20,000 drachmas in one case).

One of the most frequent solutions to such budgetary problems was to take out a loan.<sup>76</sup> Argos, for example, received a loan of 100 talents from Rhodes for repairs of fortifications and additional cavalry (c.300–250). The Rhodians did not demand interest, and this explains why we are informed about this loan.<sup>77</sup> Most cities had great difficulty finding lenders, and in repaying the resulting debts. When obliged to offer securities against loans, cities sometimes had no other choice than to mortgage their entire territory.<sup>78</sup> A decree of Krannon in Thessaly (c.179–142 BC) describes the state of the public finances: 'the city is in numerous debts because of the war that it had to endure, and these debts are being trailed about already for many years.'<sup>79</sup> Krannon had been conquered by

<sup>67</sup> Migeotte 2003.

<sup>68</sup> *Eisphora* in Hellenistic Athens: Oliver 2007: 197–9.

<sup>69</sup> Migeotte 1992; Chaniotis 2005a: 120 and 140; Oliver 2007: 199–209.

<sup>70</sup> Migeotte 1992: 21 f. no. 9, 26f. nos. 15–16, 147–61 nos. 50–51; cf. 143 f. no. 47, 163–5 no. 53.

<sup>71</sup> Migeotte 1992: 49–54 no. 21, 59–65 nos. 23–4, 105–8 no. 37, 165–7 no. 54, 169–72 no. 56, 178–82 no. 60, 211–23 nos. 68–9.

<sup>72</sup> Migeotte 1992: 28–34 no. 17; Oliver 2007: 132 f., 200–4.

<sup>73</sup> Migeotte 1992: 35–9 no. 18.

<sup>74</sup> IG XII.4.1.75–77; SEG XLVIII 1111 A 49 and B 51.

<sup>75</sup> Migeotte 1992: 249–51 no. 78.

<sup>76</sup> For a collection of the relevant material see *Emprunt* nos. 8, 9, 19, 24, 32, 39, 44, 58, 64, 68, 84, 87, 89.

<sup>77</sup> *Emprunt* 81–4 no. 19.

<sup>78</sup> Hennig 1995.

<sup>79</sup> Migeotte 113–16 no. 32; Migeotte 1992: 93–6 no. 34.



Antiochos III in 191 BC and was later occupied by the Romans; during the Third Macedonian War, agricultural production was taken over by Roman troops (171 BC). With a subscription and private donations, the city hoped to repay its debts. Tenos faced a similar situation in the early first century, when the Mithridatic Wars and the raids of pirates necessitated heavy loans.<sup>80</sup> In some cases the ultimate solution was to appeal for donations from wealthy citizens or kings.

#### 4. HOW DID HELLENISTIC POLEIS RESPOND TO THE IMPACT OF WAR?

Most of the demands to which I have referred were short-term demands: the fortification wall was built; a grain shortage was covered; captives were ransomed; loans were sooner or later (often later than sooner) repaid; the fields recovered; the runaway slaves were captured, returned, or replaced. Such short-term impacts were a temporary shock that was not forgotten. But did they also bring a substantial change to economic activities and structures, other than the further impoverishment of the poor and the widening of the gap between a small wealthy elite and the rest of the population? Do we have evidence for 'economic' measures with which Hellenistic *poleis* responded to the impact of war and adjusted their economy to the conditions imposed by long warfare?

To understand the responses of the Hellenistic *poleis* we have to take into consideration the decision-making process, which differs from that of the Hellenistic kingdoms. There can be no doubt that the initiatives were in the hands of a small wealthy and politically active elite, whose actions were nevertheless subject both to the rules of the constitution (e.g. with regard to the occupation of offices) and to approval by the assembly.<sup>81</sup> Under these conditions, *ad hoc* measures were easier to decide and implement than structural reforms.<sup>82</sup> The responses of the *poleis* to the challenges were dictated by pragmatism, not by theoretical models. And I may add that this pragmatism suited best the situation in the Hellenistic period with its continually changing political scenery. Consequently, military or diplomatic measures for the protection of the economic activities of a *polis* were more

<sup>80</sup> IG XII.5.860 = *Emprunt* 221–8 no. 64 lines 7–10: καθ' ὃν καιρὸν ἐπιγενόμενος ὁ κοινὸς πόλεμος καὶ συνεχεῖς πειρατῶν ἐπίπλοι τὴν νῆσον οὐχ ὥς ἔτυχεν συνηνάγκασαν ὑπὸ τῶν δανείων ἐπιβαρηθῆναι.

<sup>81</sup> Recent studies of the roles of elites in the Hellenistic cities: Dmitriev 2005: 140–88; Hamon 2007.

<sup>82</sup> A good example is the Ephesian law concerning the debts of farmers around 300 BC: *I. Ephesos* 4; see the detailed commentary by Walser 2008.

common than measures concerning the structure of the *polis* economy.<sup>83</sup> Diplomatic measures include for instance *asylia* decrees, treaties concerning the bringing of livestock to safety in the territory of a partner during a war, treaties concerning the recruitment of mercenaries (*xenologion*) when needed, etc.<sup>84</sup> Military measures were connected with the protection of the countryside and the collection, transportation, and safe storage of agricultural products.<sup>85</sup>

Rhodes is an interesting case, if not necessarily a typical one. Wars had a dramatic impact on Rhodian history. The highlights were the long siege by Demetrios Poliorketes in 305–304, then the First Cretan War against the Cretan pirates in the late third century, the dramatic increase of its territory after 186 BC with the temporary annexation of Lykia and Karia, the far more dramatic loss of these territories in 167 BC, and the establishment of Delos as a free-trade centre. All this of course affected Rhodian trade in general, and the wine trade in particular. The responses to these changes were diplomatic and military measures, not the result of a general policy followed continually for three centuries but measures that always need to be seen in their particular context.<sup>86</sup>

Economic measures are nevertheless attested, albeit rather limited in scale and scope. Most of them are fiscal measures, such as the creation of specific funds for the purchase of cheap grain, in other words for a control of the price of the most important food commodity (see n. 62). An honorary decree of Halasarna for Theukles shows that a lesson could be learned from bad experience—in this case the Cretan War of the late third century. Theukles procured a large amount of money for the construction of a fortification wall; but he did not stop at that. He also secured a deposit (*hypothēka*) for future needs.<sup>87</sup> At the beginning of the war between the Romans and Antiochos III (191 BC), the Achaian League forbade exports of grain, because of shortages.<sup>88</sup> In Xanthos, after the entire money had been spent because of the wars of the late third century and the city had taken many loans, a decree of the assembly regulated the financial administration, forbidding any additional requisition to be imposed upon the citizens for a period of nine years.<sup>89</sup>

<sup>83</sup> The measures taken by Delphi for the administration of Attalos II's endowment are an exception; see the analysis by Sosin 2004.

<sup>84</sup> *Asylia*: Rigsby 1996. Protection of livestock: Müller 1975; Chaniotis 1999; 200. *Xenologion*: e.g. *Staatsverträge* 551.

<sup>85</sup> Chaniotis 2008a. This was a major concern in Hellenistic Athens: Chaniotis 2005a: 121 f.; Oliver 2007: 89, 100 f., 113–59. A small selection of relevant sources: *IG II<sup>2</sup>* 668 lines 8–10; 682 lines 30–6; 791 (+ *SEG XXXII* 118); 1299 (*I.Eleusis* 196); *SEG XXVIII* 60 lines 18–27; *I. Rhamnous* 3 (*SEG XXIV* 154); 17 lines 14–17; 32 lines 7 f.; 43 lines 5–7; Paus. 1.26.1.

<sup>86</sup> Wiemer 2002.

<sup>87</sup> *Syll.* <sup>3</sup> 569 lines 15–18: *σπεύδων τε καὶ εἰς τὸν μετὰ ταῦτα χρόνον ἄθικτον τὰν ὑποθήκαν τοῖς περιπολίοις ὑπάρχειν, πεπολίτευται συνφέρουσιν καὶ δυνατὰν διοίκησιν ποιησάμενος κατὰ τῶν ἀπειθοῦντων τοῖς δόγμασιν τῆς ἐκκλησίας.*

<sup>88</sup> *SEG XI* 1107.

<sup>89</sup> *SEG XXXVIII* 1476.

A second category of economic measures concerns efforts to increase the cultivated territory. Some time in the late third or early second century (c.197 BC) the envoys of an unknown city appealed to a functionary of Antiochos III:<sup>90</sup> their city had been burned down during a war, and most of the citizens had lost their fortunes. They requested a cancellation of taxation and the sending of new settlers. The functionary agreed not to tax the city for seven years and to demand a reduced tax after this period; the city would also be free of garrisons, billeting, and the payment of other contributions. Samothrake faced a similar problem in the late third century, when part of its territory on the Thracian coast remained uncultivated, obviously because of the attacks of Thracian tribes; the Samothrakians asked a Ptolemaic commander to assist them in the construction of a fort (*ochyrōma*), so that the citizens would be able to receive land lots there and cultivate them.<sup>91</sup> Miletos recruited more than 3,000 Cretans and settled them with their families to a newly occupied territory, thus both defending it and providing it with settlers (see n. 16). Philip V tried to impose a similar measure on Larisa.<sup>92</sup>

Finally, a third type of economic measures concern a reorientation of trade. Recent studies of Nicolas Rauh and John Lund on the Rhodian wine trade from 166 to 88 BC show that the Rhodians adjusted their trade after the establishment of the free port at Delos (166 BC). While in the third and early second century BC Rhodian wine exports dominated the most important markets (Athens, Delos, and Alexandria), after 166 Knidian wines gained supremacy in Athens and Delos; also Chian and Koan exports expanded. In the western Mediterranean the export of Rhodian wine declined. In response to this competition, related to Roman expansion and to the massive export of Italian wines and of wines of centres that were under Roman commercial hegemony (Kos, Kaunos, and Knidos), the Rhodians turned to another market, to the Ptolemaic areas, Egypt and to some extent Cyprus. According to Lund, neither was the decline in the export of Rhodian wine after c.180/160 BC catastrophic nor was the rise of the exports to Egypt steep. The evidence from Alexandria rather shows a high, slightly rising, level of imports from Rhodes throughout the second century BC, which corresponds to a slow adjustment to new conditions.<sup>93</sup> The Cretan cities responded in a similar way when the usual employers of their mercenaries, the Antigonids and the Ptolemies, declined: they found new employers in Pontos, and—what is more interesting—they increased their raids as pirates and, in connection with piracy, their trade activities with slaves and booty. After the large Cretan cities (Gortyn, Knossos, Lyttos, Hierapytna) had reached the colophon of their expansion the Cretan wars stopped c.110 BC, marking the beginning of a new period in the economic history of the island. It is characterised by intensive

<sup>90</sup> *Sardis* no. 2.

<sup>92</sup> *Syll.* <sup>3</sup> 543.

<sup>91</sup> *IG* XII.8.156 B lines 17–23.

<sup>93</sup> Rauh 1999; Lund 1999 (and this volume).

trade with slaves and luxury goods, and, for the first time, a significant wine trade.<sup>94</sup> The case of Crete shows how the economy of a particular region responded not only to war, but also to the lack of war.

## 5. CONCLUSIONS

The Hellenistic world is as close as an ancient economic system comes to our modern notion of 'globalization'. The creation of large kingdoms brought huge regions under more or less unified administrative structures, and the improvement of the conditions for trade by means of international treaties intensified trade activities, in spite of the difficulties caused by campaigns and raids. At the same time, the damage caused by war had to be compensated, and this was also an important motor for economic activity: the loss of production could be alleviated through the import of grain, wine, and olive oil. The efforts of communities to safeguard their supply with manpower and food at low prices, in a period in which isolation was no longer possible (or desirable), promoted the creation of networks of suppliers of these commodities; we should associate with this demand the development of a network of grain trade and the existence of communities that provided manpower—e.g. the Cretan *poleis* and Aitolia that both sent out their own citizens as mercenaries and sold slave labour, the victims of raids. The increased demands on manpower and commodities created by war could only be met through diplomatic efforts and with external assistance. The Greeks, in general, were very reluctant with regard to economic reforms or measures. They preferred to respond to challenges than to plan ahead of time. Nevertheless, in some cases we observe short-term economic measures in response to the impact of war. The Hellenistic economic network of giving and taking was disturbed by the coming of Rome in the early second century BC. This intrusion of an external political and economic power had as dramatic an impact on the Hellenistic world as the intrusion of an extraterrestrial force in our globalized planet may one day have.

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<sup>94</sup> Chaniotis 2005b: 98–100; 2008b: 89–91; Hadzisavvas and Chaniotis (forthcoming).

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## Divine Financiers: Cults as Consumers and Generators of Value

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Analysis of the economic activities of sanctuaries has often dwelt on the general characteristics of how gods related to money, for the Greeks, who always drew a clear-cut distinction between sacred and public finances, recognized sacred property.<sup>1</sup> Scholarship connected with the administration of sanctuaries tends to emphasize the specific character of the Greek conception of the sacred, particularly insisting on the absence of a corresponding concept of 'the secular' and more generally on the impossibility of applying concepts originating in modern societies directly to the sacred domains of the ancient Greek world.<sup>2</sup> The effort to establish this specific status for the sacred within the structure of Greek institutions has at the same time led scholars to grant it only a very minor role in the dynamics of economic life.<sup>3</sup> Sanctuaries, which collect the offerings of the faithful in accumulated form, appear as anti-economic entities to the extent that accumulation immobilizes wealth in an unproductive fashion: at once sacralizers and accumulators, they consequently offer the (perhaps reassuring) image of sacred domains that stay purely sacred, far from the temptations of money, and originate in a sort of economic irrationality.

Nonetheless, a completely different perspective, emerging from the study of other sacred domains, in the Near East and Egypt, has allowed the development of a different concept, that of the 'temple economy', based on exploiting

I owe warm thanks to Stephanie Kennel for her translation of a first draft of this paper as well as to Zofia Archibald and John Davies for their advice in preparing the final English version.

<sup>1</sup> Swoboda 1888 and 1889. Numerous articles and studies by L. Migeotte analyse the organization of sacred finances: see especially Migeotte 2006.

<sup>2</sup> This interpretative trend is represented by, *inter alia*, the studies of Linders 1975 and 1987; Debord 1982; Dignas 2002.

<sup>3</sup> See e.g. Bogaert 279–304; Debord 1982: 230 and 243.

the products of sacred domains.<sup>4</sup> Likewise, evidence from the Greek world tends to show that the gods got on well with money, and not merely because they received offerings of great value.<sup>5</sup> Sanctuaries accumulated wealth, as much in the form of precious metals as in coin and real estate, but also created channels of distribution. A sanctuary can thus be regarded as an economic actor in the sense that it consumed, mainly through purchases of raw materials, and acted upon the market by auctioning contracts for construction work, hiring craftsmen, farming taxes, and leasing properties, as well as by banking activities.

The integration of a sanctuary into the dynamics of economic life thus largely depended on its managers; it was less a matter of the 'sacred economy' than of financial management. The epigraphic evidence from the Greek world that relates to sanctuaries, consisting essentially of accounts and annual or periodic inventories of the gods' wealth, bears witness to this. Administrators of sacred property had varying aptitudes, and the extent to which their management procedures developed also differs from one sanctuary to another.<sup>6</sup> Most often, these administrators were themselves citizens. Thus, in the light of the pair 'city-sanctuary', the economic nature of the sacred entity as well as the ways in which it fitted into Hellenistic economies should be re-examined.

The epigraphic evidence for sanctuaries can be viewed from two complementary angles. Sanctuaries have produced a particular type of documentation, basically accounting-related, which sheds particularly precise light on a regional economy when as full of details as the accounts from Delos, for example. The evidence from sanctuaries thereby reveals economic contexts, but we should also ask what this evidence translates into in terms of economic activities. As economic actors, do sanctuaries have the means to be the 'deciders' and to shape the economy of a region in a definitive fashion? For the Hellenistic period, the question arises all the more compellingly since we are dealing not only with continuity with an 'ancient' world but also with an enlargement of the Greek world that necessarily had repercussions on different levels.

It is therefore important to look at the manner in which activities connected with accumulation and those connected with the circulation of wealth were balanced in the sanctuaries. Although our sources are often elusive, we also need to assess the role played by sanctuaries in the movement of money and in

<sup>4</sup> The theory of the 'temple economy' has now given way to a model involving a balance of power between the state and the temples. See e.g. the studies compiled by Lipinski 1979; likewise, Renger 1994 conveniently summarizes the theoretical debates on evaluating the economy of these periods.

<sup>5</sup> Davies 2001 reintroduces the monetary process into the analysis of the role of sacred shrines.

<sup>6</sup> Chankowski 2005 and Chankowski 90–1.

the cash economy. We shall examine two aspects of the divine patrimony—accumulated offerings and holdings of real property—and two aspects of involvement by sanctuaries in economic life—building projects and the organization of their finances.

## THE COMPOSITION OF SACRED WEALTH AND ISSUES OF FUNDING ABILITY

In order to estimate the composition of sacred wealth, we are dependent on the inscriptional choices made by sanctuaries, which may result from disruptions to the normal pace of administration. Accordingly, we owe the fact that the inscribed accounts of payments and how they were used are accessible at Delphi to the sack of the sanctuary and to the fine paid by the Phocians; examples could be multiplied. In a number of cases, a building project supplied the occasion for erecting stelai to display the accounts. At Epidauros, for instance, the programme of beautification of the sanctuary between 370 and c.250 comprised, *inter alia*, the Temple of Asklepios and the Tholos. Each sanctuary had different epigraphic habits. Thus, the sanctuary of Apollo at Didyma has preserved the lists of offerings which record objects of value dedicated year after year without giving a regular review of the state of the collections. In the Athenian vocabulary for inventories, these lists would be called *epeteia*, but even if they were kept regularly by the administrators on other materials, they would not have been inscribed annually. Examination of the different epigraphical hands and of the mistakes made while inscribing allows us to observe that several yearly lists had been inscribed at the same time.<sup>7</sup> Such selectivity in inscribing hinders us from estimating the total wealth of accumulated offerings. Conversely, the administrators of sanctuaries in Attica and of the sanctuary of Apollo on Delos maintained the habit of inscribing one or more stelai each year. Based on documents displayed every month on temporary surfaces, they recorded accounts received and disbursements from the sacred treasury as well as a complete inventory of the offerings set up in the temples and the treasuries, augmented regularly by new entries.<sup>8</sup> The epigraphical habit of inscribing records can accordingly be independent of regular archive-keeping on non-durable materials, but this imbalance in evidence sometimes hinders us from proceeding very far in making a quantitative estimate of sacred wealth.<sup>9</sup>

<sup>7</sup> Marcellesi 5; Debord 1982: 419 n. 22.

<sup>8</sup> On these cataloguing practices at Delphi, see Picard 2005: 56–8.

<sup>9</sup> For the archiving of public documents, see Davies 2003.

More often, we are in a position to estimate construction costs for monuments, then to ask about the ability of the sacred treasury to finance expenditures. At Epidauros, spending on the programme of construction projects spread over a century amounted to some 240–290 talents.<sup>10</sup> But we do not know how these building projects were financed. What was the city's role? What part did the sacred treasury play? To what extent was it necessary to resort to subscriptions, as for example the naopoioi of Delphi did when the temple of Apollo had to be rebuilt in the fourth century? These figures remain low in comparison with the costs for other construction projects: between 400 and 500 talents for the Parthenon,<sup>11</sup> about 300 talents for the old (sixth-century) temple of Apollo at Delphi according to Herodotos (2.180). They are still small in comparison with the 400 talents in annual revenue that Thucydides (2.13.3) claims for the Delian League.

Some numerical indications allow us to estimate at least one part of the sacred fortune.<sup>12</sup> Diodoros, writing about the sanctuary of Apollo at Delphi (16.56.6), puts a figure of 10,000 talents on the amount the Phocians stole to pay their mercenaries. This estimate may include the currency resources of the sacred treasury (proceeds of loans, taxes, fines paid, etc.) but must mostly comprise offerings of precious metal, which were melted down as need required.<sup>13</sup> However, Davies has recently presented strong arguments that the overall total of misappropriated goods (offerings and coins) should be estimated at a maximum of 5,000 talents.<sup>14</sup> In fact, from Diodoros' references to the sack of Delphi (16.28.2, 30.1, 37.2, 56.5), we know that the precious metal offerings in gold represented at least the equivalent of 4,000 talents of silver. The rest should have constituted the sanctuary's fortune in silver, but the major part was undoubtedly not in coin. By way of comparison, and whatever the figure was at Delphi, the sanctuary of Apollo on Delos, for which the abundant epigraphical evidence allows more estimates, seems much less wealthy. The inventories enable us to follow the development of accumulated offerings. Besides the numerous votive objects of differing value, the mass of the precious metal offerings amounts to less than 50 talents of silver when weighed: 21 talents in 364/3, 46 talents in 279, and 55 talents in 179. To this should be added the value of the bullion holdings, which rises to slightly more than 16 talents at the beginning of the second century for the sacred treasury. The situation is complicated by the method of management adopted during this period, which combined the public treasury and the sacred treasury.<sup>15</sup> Hence, we do not reach a total of even 100 talents at the

<sup>10</sup> Burford 1969: 81–5.

<sup>11</sup> Stanier 1953.

<sup>12</sup> De Callataÿ 2006: 49.

<sup>13</sup> Bousquet 1988: 160.

<sup>14</sup> Davies 2007: 76–7 and 92. See also Jacquemin 1999 for an analysis of the goods concerned.

<sup>15</sup> On the development of the sacred shrine of Apollo on Delos from the Classical period to the end of Delian independence, see now Chankowski 317–37, showing the continuity of the

end of the period for which there is evidence at Delos; this, however, did not prevent the sanctuary from engaging in exceptionally extensive building activity.

Such an assessment gives the impression that accumulated offerings made up a large part of the sacred fortune—at Delos, about three-quarters were of precious metal, as opposed to one-quarter in cash on deposit. But we should guard against drawing hasty conclusions, as the epigraphical and literary evidence tends to draw attention to prestige objects and to privilege their immutable lists. The literary testimonia which could supplement the epigraphical record are mainly interested in offerings of precious metal on the occasions when the narrative involves incidents of looting. Not only Diodoros (38–39.7.1), but also Dio Cassius (frag. CCC), Pausanias (9.7.5), and Plutarch (*Sull.* 12.6–9) speak of Sulla's looting of the treasuries of Delphi, Epidauros, and Olympia in 86/5 without providing any specific figures, but dwelling on the fact that these sanctuaries were filled with gold and silver that supplied Sulla with a great deal of wealth.<sup>16</sup> Reserves of coinage and precious metal and their development might certainly have constituted the object of systematic record-keeping, but they did not generate the systematic inscription of accounts, apart from transactions related to building projects. Delos is an exception, because we can follow on stone the development of the sanctuary's cash holdings there in a fairly complete and detailed fashion. Part of the accounting work in the Hellenistic period was accomplished with the aid of banks, where the detailed records are found.<sup>17</sup>

Above all, the distinction between offerings of precious metal and deposits of cash is not always relevant when we are speaking of the circulation of wealth: some treasures of accumulated coin are more immovable than offerings of precious metal, which are sometimes melted down and coined. Thus, the inventories of jars at Delos in the first third of the second century show that quantities of coinage were frozen in the sacred treasury: eight talents in total constituted an untouchable sum, undoubtedly by reason of their provenance.<sup>18</sup> Likewise, in assuming the management of the sanctuary in 166, the Athenian administrators separated coins of non-Attic standard from the treasury and compiled an inventory of their contents.<sup>19</sup> Furthermore, sanctuaries accommodated unproductive sums of money, composed of deposits made by private individuals with the temple.<sup>20</sup> The vocabulary used in the

sacred funds during three centuries; see especially 332–5 for an assessment of the coined fortune of the sanctuary at the beginning of the second century.

<sup>16</sup> De Callatay 2006: 49–50.

<sup>17</sup> For Delos, see Chankowski. Cf. the remarks by Parker and Obbink (2000; 2001) on this phenomenon at Kos.

<sup>18</sup> Chankowski 336–7.

<sup>19</sup> Tréheux 1991: 349–52.

<sup>20</sup> Bogaert 281–8.

literary texts, however, shows that offerings were appraised from a monetary point of view, indicating the role played by weighing in estimating the results that could be obtained by striking coins.<sup>21</sup> Thus, Plutarch recalls how Sulla sent Kaphis the Phocian to Delphi under orders to weigh everything that he took away (*Sull.* 12.6–9: *σταθμῶ παραλαβεῖν*, ‘to take possession by inventory according to weight’). In the same way, the regular administrators were assigned to weigh the offerings of precious metal that could be given value, with the aim of estimating the worth of the sacred fortune, as much for cash-in-hand as for votive objects.<sup>22</sup> This is the case at Didyma where, irrespective of the debate over the manner of weighing (with coins or with weights), the lists of offerings show that the administrators wanted to reach an estimate of the value of the objects kept in the sanctuary in equivalent weight of silver; the weighing was done at the moment when the offering was dedicated or shortly afterward, and the weight of the offerings was expressed in terms of the monetary standard in use at Miletos.<sup>23</sup>

Accumulation is connected with two different systems of circulation. On one hand, the treasuries of the gods monopolized the capital of private individuals who dedicated objects of precious metal to them. On the other hand, they freed up part of the profits in liquid currency originating from the sacred capital when a silver phiale or a golden wreath was dedicated from the proceeds of the god’s income. This was normal practice when endowment capital belonging to the foundation was lent at interest, one part of the proceeds being made into phialai of precious metal, analogous to the expenses for sacrifices and banquets.<sup>24</sup> The practice was equally widespread in other contexts. It was the regular state of affairs during the Athenians’ management of the sanctuary of Delos in the fourth century, with the annual dedication of a gold crown to Apollo, which took a part of the sanctuary’s cash revenues out of circulation. Concomitantly, efficient managerial practices were intended to increase the resources of the sacred patrimony.<sup>25</sup> In the Hellenistic period, the inventories of Didyma likewise show that the city of Miletos often decided to convert the surplus from certain sources of income into silver cups, as indicated in the lists of offerings.<sup>26</sup>

<sup>21</sup> But de Callatay (2006: 38 and 49) rightly emphasizes that the verb *κατακόπτω* must not be systematically interpreted in the sense of an issue of coinage reckoned from offerings that have been melted down.

<sup>22</sup> As expressed for example by the traditional formula of the Athenian and Delian inventories (cf. *ID* 104.2–3): *τάδε παρέδοσαν σταθμῶι καὶ ἀριθμῶι*, ‘these things they handed over weighed and numbered’ (i.e. for metal offerings permitting an equivalent in silver and for sundry ex-votos respectively).

<sup>23</sup> Marcellesi 5–25 and especially 12–13; Bresson 213–19. Cf. also Debord 1982: 218 on the financial role played by the inventories of offerings of precious metal at Didyma in the valuation of the state’s wealth.

<sup>24</sup> e.g. Vial 1984: 213–14.

<sup>25</sup> Chankowski 119–22 and 339–41.

<sup>26</sup> e.g. *Didyma* 433 (a. 270–269), lines 16–17.

At sanctuaries, therefore, there existed a fund of circulating cash, often difficult to detect in the documentation, and a treasure to which, in the process of accumulation, an estimated monetary value tended to be assigned in coined silver or precious metal. Silver phialai especially represented the most efficient way to accumulate precious metal, being easily counted, uniform and easily coinable or recoinable.<sup>27</sup> In the composition of the sacred fortune we can discern a conception of capital that it would undoubtedly be a mistake to classify too strictly from the standpoint of unproductivity, for this fortune, both liquid cash as well as votive offerings, was estimated globally and was potentially recoverable through the channels of redistribution of wealth. But the part in actual circulation was less than the accumulated part, and the part in circulation could itself end up becoming re-accumulated profits. The practice of compiling inventories in order to allow an estimate of the sacred fortune in monetary terms thus simultaneously reflects the quite small proportion of precious metal (gold and silver) that was minted in the Hellenistic period.<sup>28</sup>

It would be advisable, however, to introduce a diachronic dimension into these observations. Anthony Snodgrass's study, based on archaeological data, of the economic stake represented by the dedications in Greek sanctuaries has drawn attention to the low proportion of offerings for the Classical and Hellenistic periods in comparison with the number of dedications that can be estimated for the Geometric and Archaic periods by category of offerings. If the evolution of customs and techniques of craft production account for certain disappearances, the overall tendency for objects dedicated in sanctuaries to diminish is explainable, according to Snodgrass, by an evolution in the forms of dedication, which over the centuries came to take the form of gifts converted into buildings, statues, and inscriptions.<sup>29</sup> To these observations should be added the growth of the practice of establishing endowments for religious foundations in the Hellenistic period as another form of offering in sanctuaries.<sup>30</sup> Because these foundations made loans at interest to increase their capital in order to finance the activities prescribed by their donors, they in all likelihood constituted a very important factor for change in the economic relations of Greek sanctuaries. Of course, if the spread of the practice of dedicating endowments within the context of religious foundations helped to transform the nature of offerings in Hellenistic-period sanctuaries, it must also have enlarged the options available for those seeking credit, which made

<sup>27</sup> Lewis 1954: 48.

<sup>28</sup> De Callatay 2006: 65; 'Si la part monnayée paraît congrue, c'est que l'or et l'argent sont surtout conservés sous forme de lingots ou de vaisselle et de bijoux.'

<sup>29</sup> Snodgrass 1989–90.

<sup>30</sup> Laum 1914, 1.237–46.

sanctuaries a place to go for transactions involving small-scale lending at interest.<sup>31</sup>

## THE MOVEMENT OF FUNDS WITHIN SANCTUARIES

We should now consider the dealings that sanctuaries had with coined silver and the circulation of capital. First of all, the banking activities that sanctuaries carried on are the means by which we can apprehend the extent of their involvement—we could even simply say their ‘embeddedness’ in the economy—and measure their role in the circulation of cash assets.<sup>32</sup> In his study of banks in antiquity, Raymond Bogaert counted approximately thirty sanctuaries that offer evidence for banking activity.<sup>33</sup> Examination of their banking transactions, however, shows that they were extremely varied; many establishments accepted funds on deposit (*παρακαταθήκη*) without such activity involving circulation or profit. In this case, the choice made by private individuals for security of shelter won out over the potential for gain.<sup>34</sup> We will thus understand the term ‘banking’ in the sense of a credit-based financial activity by which sanctuaries made their holdings turn a profit. In the strict sense, certainly, it is difficult to speak of banking activities insofar as the deposits were not lent.

The sanctuaries that practised lending at interest recognized two categories of borrowers: private individuals on the one hand, the city that managed the sanctuary on the other. The funds used for these loans were sometimes the sanctuary’s own funds, sometimes capital from an endowment that had been offered to the sacred treasury. The principle in the latter case is well known: the capital, lent at interest, produced an income that enabled the funding of supplementary expenses, generally anticipated in the act of foundation (banquets, sacrifices, offerings, etc.).<sup>35</sup> These capital amounts, quite distinct from the sacred treasury properly called, thus do not correspond to the surplus released from the sacred treasury in order to conduct banking activities, but rather to contributions originating in benefactions. All the same, the evidence is not always clear regarding this distinction, so that the testimonia for

<sup>31</sup> See *infra* 150–1 and 157–8. On the broader development of credit in the Hellenistic period see Gabrielsen 2005 and 2008.

<sup>32</sup> This section summarises my discussion in *Topoi* (Chankowski 2005), which should be consulted by readers seeking more detail. See esp. 89–92, presenting available data.

<sup>33</sup> Bogaert 281–8.

<sup>34</sup> Picard 2005: 60.

<sup>35</sup> The corpus of evidence is collected in the ever-useful work of Laum 1914. For a legal analysis, see also Mannzmann 1962. About the ‘careful calculation’ and ‘adroit planning’ of endowments, see Sosin 2001.



banking activities in sanctuaries do not always allow us to discern the loans made from a sanctuary's own funds.

In certain cases, the existence of banking activity by a sanctuary drawing on its own funds probably attracted the establishment of foundations. Thus, at Amorgos, the regulations for the foundation of Kritolaos (*IG XII 7*, 515, lines 17–19) at the end of the second century refer to clauses which govern loans from sacred funds (*καθάπερ τὰ ἱερὰ χρήματα*): interest of 10 per cent was payable each year to the Council in the month of Apatourion under penalty of reclamation by the *logistai* and a fine amounting to as much as half the principal borrowed.

The sanctuary of Apollo at Delos is well known for its loans to private individuals, as much during the Classical period as during the time of the island's independence, from both its own funds and the endowments provided by foundations.<sup>36</sup> The sanctuary of Delphi has not provided epigraphic evidence attesting to the same activity, but two foundations are mentioned in the second century, that of Alkesippos of Kalydon (*Syll.*<sup>3</sup> 631) and that of Attalos II (*Syll.*<sup>3</sup> 672), increasing the *ἱερὰ χρήματα* and enabling loans to be granted. Along with other indications, these two testimonia show that the sacred treasury had cash in abundance during this period. Later on, in the first century of our era, two inscriptions mention the *τόκοι* and *πρόσοδοι* of the sacred treasury (*Syll.*<sup>3</sup> 813 A and B) which served to pay for repair work on the polygonal wall and the peribolos. A recently published dedication refers to interest obtained from the investment of the sacred funds and to income from rentals and leases.<sup>37</sup>

Other sanctuaries were in the habit of lending money to private individuals, as certain allusions in decrees and regulations show. On Euboia, a set of regulations dated to the third century from the sanctuary at Dystos near Eretria (*IG XII Suppl.* 533) sets forth the conditions for transactions between private individuals and the debtors of the sanctuary whose possessions guaranteed a loan. On Ios, a decree honouring Antigonos Monophthalmos (*IG XII Suppl.* 168, lines 12–13, dated around 306–301) refers to the debtors of the sanctuary of Pythian Apollo (*οἱ ὀφείλοντες τὰ ἱερὰ*) who would not benefit from the cancellation of debts, but these debts could equally have involved capital lent as leases or rents and provide no guarantee of regularly conducted banking activity. At Priene, the decree honoring Krates, dated to the first century BC, testifies more explicitly to the lending activities performed by the treasury of Athena. As an administrator of the sacred property Krates had been particularly vigilant in ensuring that money from loans was collected and

<sup>36</sup> Vial 1984: 140–5 and 367–83; *Emprunt* 156–7 and 161–6; Chankowski 367–76. Here again, the practice of lending at interest, which developed during the Classical period, can be thought to have attracted the foundations that appeared during the Independence years.

<sup>37</sup> Mulliez 1992: 329.

arrears of interest were paid (*I. Priene* 111.202–9).<sup>38</sup> In any case, we should note the concern, paralleled in other inscriptions,<sup>39</sup> for protecting sacred wealth by separating it from debt remittance procedures. Beyond respect for the divinity, we must likewise observe a concern for preserving productive assets, the profits from which enabled certain activities to be carried out.

When the city entrusted with the administration of the sanctuary happened to be the debtor, these loans became akin to a line of credit or to liberally administered advances, thanks to a ‘debit account’ recorded in the public or sacred archives. Thus, the temple of Athena at Priene agreed to make regular loans to the city—to enable it to ensure extraordinary expenses could be met (*I. Priene* 20 and 44, dated to c.270–262 and the second century respectively). At Keos, the city of Karthaia borrowed sums ranging from 12 to 2,600 drachmas from the temple of Pythian Apollo on several occasions; these amounts were guaranteed by the property of some of its citizens (*IG XII* 5, 544B, end of the fourth century/beginning of the third century). From regular borrowings, it was easy to proceed to open a permanent line of credit from the sacred treasury during certain periods. The Athenians made use of this system with the treasury of Athena and that of ‘the Other Gods’ in the fifth century.<sup>40</sup> At Epizephyrian Locris, the city benefited from a permanent line of credit from the funds of the sanctuary for which it had responsibility.<sup>41</sup> This organizational model reappears between 314 and 167 in the independent city of Delos, which took advantage of lines of credit offered by the sacred treasury of the sanctuary of Apollo, of which it was currently the manager. In the fifth and fourth centuries, the sanctuary of Delian Apollo was the responsibility of the Athenians, who instituted an innovative style of financial management based largely on the loans granted to cities on various islands, whose proceeds went into circulation.<sup>42</sup> After the departure of the Athenians in 314, the opportunities for borrowing were shut off and lending became almost exclusively the province of the Delians and their city; the sacred funds thus functioned as a spare account for the city of Delos and the Delians.<sup>43</sup>

<sup>38</sup> For a complete list of testimonia, see Chankowski 2005.

<sup>39</sup> In Ephesos for example, the law of 86/85 excludes from debt remittance loans contracted on endowments (*I. Eph.* Ia 8 = *Syll.*<sup>3</sup> 742.36–41). Later on (c. AD 41–6), the proconsul Paullus Fabius Persicus took measures to protect the sacred funds from being borrowed by the city without insurance of repayment from public incomes (*I. Eph.* Ia 17.48–50).

<sup>40</sup> For the most recent comprehensive study of Athenian financial organization, see Samons 2000. Also Blamire 2001; Kallet 2004.

<sup>41</sup> Migeotte 1988.

<sup>42</sup> See *infra*, p. 154.

<sup>43</sup> In the first decades of Delos’ independence, two other cities—Peparethos and Hermione—continued to benefit from a loan from the sacred fund of Delian Apollo, but that probably has to do with old loans going back to the period of Athenian control. Around 280, the Delians received help from Philokles, king of Sidon, supported by Ptolemy I, to recover funds that were in circulation and oblige debtor cities to repay their debts. This external support is undoubtedly what terminated the lending circuit which the Athenians had initiated with island cities.

In this sense, the borrowing arrangements that cities entered with their temples were only internal financial transactions.<sup>44</sup> This is demonstrated further by the fact that in the second century at Delos it was the same administrators of Apollo's sacred wealth, the *hieropoioi*, an annually selected college of magistrates, who concurrently managed the sacred funds and the public funds; in handling the latter, they were assisted by the city's treasurers. The two accounts were not confused with each other; their holdings were accounted for jointly and the *hieropoioi* added them all up. The objective was to reach a full estimate of the city's financial options, as much from the viewpoint of its public funds as from the resources of the sacred treasury, with the goal of profiting as best they could from the credit options that the sacred funds offered without going as far as to endanger the sanctuary's administrative stability.<sup>45</sup>

Loans granted to foreign cities by sanctuaries thus appear to have been very rare events, and banking activity never reached the level known at the sanctuary of Delos in the Classical period under the first Athenian domination.<sup>46</sup> Only three other examples of these arrangements are actually known, occurring in the context of federal leagues and in very different historical circumstances. The first case concerns a loan granted from the sacred fund by the Oiniatian League to the city of Drymeia around the middle of the second century,<sup>47</sup> but we do not know whether the League routinely made loans at interest from the sacred fund which it managed. The other two instances are still less clear-cut. One has to do with the unpaid sums owed by the cities of the Troad confederation to the sanctuary of Athena at Ilion. Known from the financial agreement of 77 BC, they have occasionally been interpreted as loans,<sup>48</sup> but comparison with other inscriptions relating to the festival of Athena Ilias indicates that it could be a matter of contributions paid by the cities of the league and earmarked for the operation of the cult.<sup>49</sup> The other instance is similar, concerning a debt contracted shortly after 129 by Priene with the Panionion, which it managed. The honorific decree for Moschion and his brother Athenopolis pays tribute to these two citizens of Priene who, at a time when the Ionian League's fund needed to have its accounts credited but Priene could not pay what it owed to the Panionion, resolved the situation by

<sup>44</sup> *Emprunt* 4. Hence Migeotte excluded this category of borrowing from his catalogue of public loans.

<sup>45</sup> Chankowski 2008.

<sup>46</sup> Pace Dignas 2002; despite the nuances that she brings to the discussion, she tends to homogenize the banking activities conducted by various sanctuaries from a desire to extrapolate from the best-documented cases. Cf. Dignas 2002: 24; 'Delos was probably the most important institution of sacred lending in antiquity, but again an exception only in scale.'

<sup>47</sup> For the date of this text, see now Mulliez 1998.

<sup>48</sup> Bogaert 239; Debord 1982: 229.

<sup>49</sup> *Emprunt* 267 n. 31. On this document and the festival, see Robert 1966: 15–17 and 18–36.

paying the sum themselves (*I. Priene* 108). Here again, it may not have been a loan but rather a contribution requested by the league.<sup>50</sup>

What picture of the financial transactions conducted by sanctuaries emerges from these various instances? Study of the well-documented case of Delos, combined with individual testimonia from other sources, allows us to state that, in what we can call 'the sacred economy', the lending at interest of a part of the god's assets was, first of all, one of several ways of making the sanctuary's revenues yield a profit while also funding the sanctuary's needs. Wherever we have sufficient evidence, the main concern of the administrators of the sacred finances appears to have been the successful management of resources so as to ensure religious life (sacrifices, feasts, festivals) would function securely without being a burden on other forms of funding, public or private. This is also why sacred capital was generally excluded from transactions connected with debt remission.<sup>51</sup>

Xenophon, describing how he founded an estate for Artemis at Skillous in memory of the sanctuary at Ephesos he had seen during the expedition of the Ten Thousand, sheds light on how a small-scale religious operation was established (*Anab.* 5.7–13). He was obliged to provide his foundation with an endowment that would enable its needs to be funded: the ground on which the sanctuary was to be built was fertile land, abounding in game and good for raising livestock, with the fish-filled waters of the Selinous river running through it. The produce of the estate was precisely what supported the sanctuary: the tithe was to be used to offer a sacrifice to the goddess every year in which all the people in the neighbourhood would participate.

The same preoccupation is articulated in certain texts from Kos. One is a decree of the third century relating to the construction of a *thesauros* for the Asklepeion (*LSCG* 155) that governs the setting-up of a central deposit into which revenues from different sources would be paid according to the decision of the people (*dēmos*). This treasury was distinct from the chest by the altar designed to receive the offerings of pilgrims already at the sanctuary (B, line 4). The decree altered neither the god's possessions nor the nature of the sacred money, which was never confused with the city's own possessions, but instead conferred a single new designation on funds that until then had been scattered. This decision probably occurred at the moment when the Asklepieia were founded and was thus motivated by the need to have a permanent fund on hand that could be made to yield a return to finance the festivals. Another text, dated to the second century and relating to the sale of the priesthood of Aphrodite Pandamos and Pontia, specifies that the proceeds from sacrifices and gifts offered by the faithful should be deposited in a *thesauros* (here, a chest for offerings). The sums would be divided between the priestess and the

<sup>50</sup> *Emprunt* 297.

<sup>51</sup> See the case of Ios above.

goddess. Paid into the goddess' bank account, they would be used for construction projects and repair work in the sanctuary, according to the decisions that the assembly would take and without it being possible to put them to any other use.<sup>52</sup>

In the application of these principles, banking activities occupy a variable place, for sanctuaries occasionally privileged other forms of resource. In a recent study that was not limited to the Hellenistic period but took Athenian administrative practices of the Classical period as its starting point, I endeavoured to show that the concept of the sacred domain as capital for producing profits is essentially the development of an Attic tradition that was capable of spreading around the Aegean in the Hellenistic period. As a result, the banking activities of sanctuaries in the Aegean region appear much more developed than those at sanctuaries in Anatolia.<sup>53</sup> The reason for this above all is that, for sanctuaries, banking activities developed as part of a series of financial measures whose aim was to increase revenues. The evidence for the sanctuaries of Asia Minor, across the board, shows a perceptible difference from the sanctuaries of mainland Greece and the islands—land, being more widely available, was what constituted the principal source of wealth that enabled funding of religious activity. Furthermore, the testimonia for cases of arbitration and benefactions by kings in favour of sanctuaries affirm an abiding preoccupation of the managers of sacred property: to assert their rights to sacred lands.<sup>54</sup>

The quarrel between the city of Mylasa and the priest of the sanctuary of Zeus at Labraunda clearly illustrates this concern. When the city was defending its rights in regard to the sanctuary, it did not call into question the responsibility of the priest charged with seeing to it that religious activities were carried out properly, nor the personal advantages that he could derive from his post. The city simply claimed the right to use the income from the sacred lands of Labraunda to fund the sanctuary's festivals. It was a financial difference of opinion: the city of Mylasa was unwilling to have to resort to sources of funding (public or private) other than those already available to the sanctuary by virtue of the income from these lands.<sup>55</sup> Moreover, donations of land to sanctuaries, together with the income belonging to them, are always clearly assigned a value in the textual sources as a method of increasing the sacred resources.<sup>56</sup>

Several inscriptions from Caria show the development, in the course of the second and first centuries, of the practice of dedicating private land to

<sup>52</sup> Parker and Obbink 2000, no.1: 16–24.

<sup>53</sup> Chankowski 2005.

<sup>54</sup> On these royal arbitrations, see Dignas 2002: 36–109.

<sup>55</sup> *I. Labraunda* I, 1; *I. Labraunda* I, 3; Dignas 2002: 59–61.

<sup>56</sup> See e.g. the inscription from Baitokaike, *IGLS* VIII 4028, with the remarks of Dignas 2002: 74–84.

sanctuaries. In fact, it was a transfer of property, with the land immediately taken back by its old owner under a lease at a very low rate. This procedure allowed sanctuaries to recover sources of regular fixed income through leases and private individuals to preserve the usufruct of their lands, probably with tax exemptions that compensated for paying for the lease.<sup>57</sup> There, the productive capital was composed not of liquid assets but of land that, when leased out, ensured the sanctuary received regular cash income.

The development of banking activities, then, appears not to have been an essential aspect of the operations of the sanctuaries of Asia Minor. On the contrary, cash surpluses could be used to buy land. For example, in the first century, Olymos in Caria recorded the purchase of land for the sanctuary of Apollo and Artemis.<sup>58</sup> Land also appears as a privileged form of wealth at Sardis. The sanctuary of Artemis, which had significant liquid assets at its disposal since in the course of the second century it had lent Mnesimachos 1,325 gold staters, became the administrator and beneficiary of the debtor's estates through confiscation when he was found to be insolvent.<sup>59</sup> The case of Halikarnassos is the only exception, since the proceeds of the confiscations for unpaid debts (lands and houses) were sold for the benefit of the sanctuary.<sup>60</sup> But we do not know whether this action, which took place at the end of the fifth century, was an exception or a normal occurrence.

This imbalance between Asia Minor and Greece proper in respect to the banking activities of their sanctuaries reflects to a certain degree the overall development of the banking phenomenon: Raymond Bogaert has shown that the cradle of banking was mainland Greece, not Asia Minor, as its evolution in the Classical period demonstrates, but also that the profusion of money after Alexander's conquests contributed to the rapid development of first private, then public banking in the ancient Persian Empire. According to Bogaert, the Hellenistic period was precisely when sacred banks declined, yielding the advantage to private bankers.<sup>61</sup> The asymmetrical development of banking activities in the sanctuaries of Asia Minor, compared to the sanctuaries of mainland Greece, can certainly be explained by the rapid spread of private banks offering a sufficiency of credit options, but the difference is mainly due to the fact that these sanctuaries, unlike those of Attica and the islands, never

<sup>57</sup> Dignas (2002: 96–104; cf. 117–26), rightly critiquing the theocratic interpretation of Laumonier 1958, develops an interesting parallel with Trajan's *alimenta*; she also addresses the high date (beginning of the second century) proposed by Gary Reger for the dossier of land transfers at Mylasa.

<sup>58</sup> *I. Mylasa* II, 801. In order to complete one of these purchases, the sanctuary, which was short of cash, resorted to taking out a short term loan from a private individual (*Emprunt* 329; Bogaert 270).

<sup>59</sup> *Sardis* VII, 1. Cf. Dignas 2002: 70–2 and 279–87 [Appendix I].

<sup>60</sup> *Syll*<sup>3</sup> 46. Dignas (2002: 70 and 73), does not take this difference into account.

<sup>61</sup> *Emprunt* 410.

based their financial stability on loans at interest.<sup>62</sup> Far more than managing their own funds, what incidentally led these sanctuaries to conduct banking activities was the foundations set up by wealthy private individuals.<sup>63</sup> In addition to the foundations known at the sanctuaries of Athena at Ilion and of Asklepios at Lampsakos, this phenomenon is illustrated by our latest example, the regulations for the foundation of Attalos at the sanctuary of Aphrodite at Aphrodisias in Caria, still in the second century AD. When Attalos bequeathed the sanctuary an endowment amounting to 122,000 denarii that was already partially tied up in loans granted to the citizens of Apollonia Salbake and guaranteed by a mortgage on their properties, it in turn assumed the role of creditor.<sup>64</sup>

The prevailing logic of the sacred treasury's transactions consequently appears less as the expression of an immediate wish to become involved in economic and financial processes than as the consequence of a patrimony-based conception of sacred wealth: what is the best way to get sufficient income and how to increase it? Administrators were just doing their job: the sacred treasury had to be able to finance its expenditures through its own revenues, which took such various forms as leasing property, selling livestock, tax-farming, loaning money belonging to the god at interest, and so on. These are the transactions that we can observe most years between the third and the second centuries in the accounts of the *hieropoioi* of the sanctuary of Delian Apollo. Thus, in 279 (IG XI 2, 161) for example, the income from leases and loans, totalling approximately two talents, managed to cover the expenses of the construction projects committed to during that year. This ideal of autonomy did not always function flawlessly, attesting to uneven performance as regards financial management. Some texts (e.g. *I. Lindos* 419) report how the cost of religious activities and difficulties resulting from a shortfall in sacred income reached the point of necessitating public subscriptions.

In consequence, sanctuaries found themselves at the centre of financial activities because they, or rather their citizen-administrators, used financial techniques which demonstrated their worth, especially banking methods that brought about capital growth. The sources available on the subject of 'sacred

<sup>62</sup> The case of Ephesos may be a notable exception (see Davies, this volume), but the principle does not seem to have been very carefully protected by the administration, since the law of 86/85 (*I. Ephesos* Ia, 8 = *Syll*<sup>3</sup> 742.36–41) does not exclude the sacred funds from debt remission, except for the funds coming from endowments belonging to religious associations. It is then questionable whether loans at interest could really contribute to financial stability in the sacred funds.

<sup>63</sup> The cultic foundations in the sanctuaries of Asia Minor are in the main endowed with real estate: see Debord 1982: 202–7 on religious foundations and their Eastern antecedents. When it comes to capital intended for loans, as is the case at Ilion (*I. Ilion* 52, the foundation of Hermias; *I. Ilion* 55, another foundation) and Lampsakos (Laum 1914 2.66) they are entrusted to public bankers to yield the returns assigned to the organization of supplementary celebrations (sacrifices, feasts). Cf. *Emprunt* 237–8; Gabrielsen 2008.

<sup>64</sup> Laum 1914 2.102. Cf. Robert and Robert 1954, no.148; Debord 1982: 414 n.190.

economies' unquestionably enable us to see the transfers of competence and the exchange of financial methods between the sacred domains and public administrative practice.<sup>65</sup> But must the character of the financial methods employed in the management of sanctuaries, which were often quite effective, lead us to conclude that sanctuaries can be classed among the factors that drove economic activity?

The development of credit through sacred money does not mean that sanctuaries contributed to the injection of masses of supplementary cash into local or regional economies; as other studies have shown, episodes of plundering were a more likely factor in transforming accumulated offerings into liquid cash that was reintroduced into circulation by the expedient of minting coins.<sup>66</sup> The development of the credit-offering function made the sanctuary an economic middleman, but the role it played in financial and monetary stability remains to be clarified.

When it was a matter of loans from foundation endowments or from their own funds, sanctuaries seem to have decided to respond to the demands of a regional clientele by offering small sums (between 30 and 200 drachmas), lent generally at 10 per cent interest. Without doubt, they thus answered a demand that could not be satisfied elsewhere in the networks of lending at interest. But it is important to bear in mind that we are facing a moving picture with considerable regional differences along the period, so that the possibilities of gaining access to sacred funds through credit could vary significantly from a place to another: even though the Artemision of Ephesos was called by Aelius Aristides *τῆς χρείας καταφυγήν* (23.24), certainly because borrowing money from the sacred funds was easy, a citizen from a smaller city could have more limited opportunities in his fatherland and be obliged to appeal to bigger sanctuaries. A debtor living in Attica could turn to the sanctuary of his deme, when the city itself was borrowing the sacred funds of the Acropolis, but elsewhere, the competition between the needs of the cities and demand by private individuals was more noticeable and influenced the organization of credit in the sanctuaries. Because of the gaps in our sources, quantitative developments in the masses of coinage put into circulation by sanctuaries through loans at interest are more difficult to identify. Here too, following upon the acts of the Athenian administrators of Delos in the Classical period, the accounts of the Delian *hieropoioi* provide the fullest documentation. The Athenian management of the sanctuary of Delian Apollo in the fourth century constitutes an exception in terms of the amount of money available for circulation as loans; in the course of the fourth century, between 45 and 48 talents may have been put into circulation (in 377, 43.4 talents were lent to

<sup>65</sup> Chankowski 2008.

<sup>66</sup> Davies 2001; de Callatay 2006.



island cities and 3.4 to private persons).<sup>67</sup> Thereafter the period of Delian independence displayed a management style that was no longer sympathetic to private individuals. Though the loans to island cities disappeared fairly quickly, the city of Delos could on the other hand utilize the sacred funds as cash advances, with the result that, in their accounts, the *hieropoioi* were obliged to respond to two budgetary requirements—the need to finance regular large construction projects in the sanctuary and the city's repeated requests for funds—which they had to be in a position to satisfy.<sup>68</sup> Although the sources do not always allow us to compare exactly the same data—sums actually lent, sums potentially in circulation in the form of loans, interest paid annually, and payments of arrears—it is possible to base the comparison on maximum values. The accounts of the *hieropoioi* show that loans to private persons definitely did not exceed a total amount of 4.5 talents if we add foundation endowments to the sanctuary's own funds. In 279 (*IG* XI 2, 161 A), less than one talent was in circulation in the form of loans. In 250 (*IG* XI 2, 287 A), 4.4 talents were active as loans (of this amount, 0.7 talents came from foundation capital). In 179 (*ID* 442 A) between 1.7 and 2.8 talents were active as loans. In total, the sums available for loans to private individuals from the sanctuary's own funds did not increase compared to the fourth century; rather, the amount even declined. The foundation endowment was what provided an auxiliary contribution toward loans. In this financial area, money was probably attracting money if donors knew that an endowment would meet a demand and would be able to make profits.

Greek sanctuaries may thus appear to be among the high-performing groups in terms of management insofar as their administrators utilized financial techniques developed in cities based on their experiences of Athens in the Classical period. But does the existence of financial management techniques always imply economic development? Confronted by the recurring problem of the lack of liquidity in the economies of the ancient world, sanctuaries responded to an existing demand that clearly emerged from a clientele of middling or humble means who did not have easy access to deals with bankers or funding networks. From this point of view, the sacred funds could be considered an alternative for people in search of credit and in a position to offer guarantors for the loan of modest sums which might correspond to expenditures, even to investments, within the context of the *oikos*. But the quantities of cash injected remained small and in particular seem hardly to have evolved between the fourth century and the Hellenistic period, if we allow extrapolation from the well documented case of Delos and understand that

<sup>67</sup> See above, p. 151.

<sup>68</sup> Feyel 482–4.

regional differences continued to be quite marked. The development of endowments as a new form of dedication was what made the real difference.<sup>69</sup>

This involvement of sanctuaries in the circulation of capital through the use of tried-and-tested financial techniques moves us to ask about their role in the organization of exchanges—what types of transactions do they employ and, hence, what forms of market do they reveal?

## SANCTUARIES AND THE MARKET

For their own functioning, sanctuaries generated a demand for specific products that was not comparable to that of an *oikos*: building materials, rare and precious substances, metals, and so on. For Didyma and Delphi as well as for Epidauros and Delos, building projects contracted by the sanctuaries could not limit their suppliers to the nearest available sources. If the pitch that arrived at Delos did not necessarily come from Macedonia, nor the *miltos* exclusively from Keos, the specific demand generated by the construction sites compelled the Delian market to become involved with commercial channels other than those required for basic provisioning of the local community with staple foodstuffs. Conversely, the weight of the sanctuary's orders in materials for which the Delians were in any case dependent on imports, such as firewood and timber for building, could facilitate the provisioning of the city and prompted specific public legislation that served the interests of the citizens and of the sanctuary.<sup>70</sup> This undoubtedly explains why the craftsmen operating in and around the construction sites at Delos, in contrast with Delphi, never supplied wood for building, which was always taken from the stocks managed by the *hieropoioi*.<sup>71</sup> As much as the care taken to relieve potential shortages, we also have to appreciate the desire of the *hieropoioi* and of the city to benefit from a supply channel which must have been to their advantage, whereas craftsmen by themselves could not have obtained such building materials from other suppliers on equally advantageous terms.

Indeed, the regular upkeep of the sanctuary's accounts, with lists of recurring expenditures for supplies of food and building materials that were elaborated from year to year by the successive boards of *hieropoioi*, and inscribed in their entirety after each board presented its accounts, made the administrators perfectly aware of changes in prices and very likely increased their freedom to negotiate with contractors and suppliers. Without being able

<sup>69</sup> See above, pp. 148–9.

<sup>70</sup> For example, the law on the sale of wood and charcoal (*ID* 509); on this text, see most recently Bresson 2006, who reports earlier scholarship.

<sup>71</sup> Feyel 419.

to speak properly of market price lists, the accounts of the Delian *hieropoioi* assure us that the citizens, who in turn took on the responsibility for managing the sacred fortune, were cognizant of price variations and current financial news.<sup>72</sup> Had the accounts at other sanctuaries been inscribed in as abundant a fashion as at Delos, this conclusion could probably be articulated in certain other cases.

The Delians were also well endowed with the means to exert influence on prices in certain circumstances. At Delos, the *hieropoioi*, who were in charge of the sanctuary's administration, had to assume the management of the building sites with the assistance of an architect and of supervisors (*epistatai*) for each site. To this responsibility was added the task of seeing to the regular maintenance of the numerous buildings that belonged to the sanctuary. On average, the sanctuary of Delos put about fifty artisans and tradesmen to work each year, who might be contractors, suppliers, or repairmen, making use of a pool of local labour from the Cyclades, mainly from Paros and Naxos, but resorting as well to craftsmen from more distant islands, Asia Minor, and the Peloponnese. The *hieropoioi*, who functioned as the sponsors, took care to arrange for competitive conditions that would be favourable to the sanctuary's finances. They might for example facilitate the emergence of a competition among craftsmen from far and wide, ensuring that foreigners did not find themselves at a disadvantage compared to local contractors by granting them tax exemptions for themselves, their workers, and their equipment.<sup>73</sup> The difficulties attendant on the tendering process might likewise contribute to fiercer competition. A contractor would not clinch the deal without having first presented one or more trustworthy guarantors, with fairly brief time limits (indeed, three days after the winning bid was announced). Furthermore, he would have to put up a stele, its dimensions precisely defined, on which the contract was inscribed, followed by the names of the craftsmen, their guarantors, and their witnesses. If the contractor selected failed to fulfil these demands, the contract would be put out for another round of bidding. These competitive conditions must have spurred craftsmen to submit the lowest possible offers, but the Delians would likewise have foreseen the need to avert the danger of fraudulent bids that exceeded the successful bidder's means. In the contract for the installation of stone flooring of the temple of Apollo, inscribed in 297 (*ID* 502), the committee in charge of construction obliged the contractors to produce a guarantor against the bid being fraudulent, who was to give a deposit only for the tendering process, without taking the place of the guarantors to be supplied once the deal was made (*A*:8–9). If there was a fraudulent bid and the winning bidder could not produce definitive guarantors, the *epistatai* reserved the right to recover the difference between the first contract awarded

<sup>72</sup> Chankowski 2008: 90–2.

<sup>73</sup> Feyel 474–509.

and the second, more expensive one from the guilty contractor and his guarantor.<sup>74</sup>

The interventions of a sanctuary such as that of Delian Apollo in economic processes through the tendering process gave its needs weight in the balances of exchange. This argument also applied to sacrificial animals. Sanctuaries generated a strong demand in this area and influenced prices to the extent that several sacrificial calendars set minimum prices for animals to be sacrificed. These prices indicated to the dedicant the sum he should deposit to see that his sacrifice was performed, based on the estimated weight of the animal but at the same time fixing a value; the sanctuary thus established a scale of values by requiring a minimum expenditure on the part of the suppliers.<sup>75</sup>

This influence on the market is also evident in the specific types of transactions to which the sanctuaries resorted—soliciting tenders and the awarding of contracts to the lowest bidder. At Greek sanctuaries, these practices are particularly well documented for building contracts, as well as for tax-farming (Delos), the purchase of supplies and building materials (Epidauros, Delphi, Delos), and the sale of priesthoods (Kos), to mention only a few examples. Generally speaking, the tendering process should be regarded as constituting the main form of exchange relationship that sanctuaries maintained with the economy. Tendering, while being representative of market relations, at the same time generates a relationship to value and a method of setting prices which may differ, in time and in result, from transactions performed in a two-party sale, in which only one seller faces one buyer at once. The fact that the contracts often involved not only the work itself, but also the supplying of the materials, did not prevent sanctuaries from being occasional customers on the regular market and in the shops of craftsmen and suppliers in addition to utilizing the tendering system. This recourse to two different ways of doing business may, moreover, explain, especially in the accounts of the *hieropoioi* of Delos, certain variations in price; they do not always reflect market trends, but sometimes a difference in the estimation of value as well, with a gap between the market price and the contractual price set by bidding.<sup>76</sup>

The efforts of the administrators of sanctuaries, especially during periods of construction, converge on one and the same aim: obtaining the best price. To achieve this, they had one other trump card: their reserves containing coins of various standards, so that they could offer cash payments in different currencies. We therefore see the treasurers of Delphi using different coinages to purchase the materials needed to reconstruct the temple of Apollo. Likewise,

<sup>74</sup> For a discussion of this subject, see Feyel 1941: 160–2.

<sup>75</sup> Most often, the origin of these animals is unknown, as they were seldom raised by the sanctuary itself: Chandezon 2003: 114–16.

<sup>76</sup> This difference is particularly noticeable in the variations in the cost of wood. I shall return to this question elsewhere with reference to the Delian law regulating the sale of wood and charcoal (*ID* 509).

the Sikyonians demanded payment in gold for supplying cypress wood, and a merchant from Piraeus required payment in Attic drachmas.<sup>77</sup> The *hieropoioi* of Delos similarly made use of Rhodian silver for payments<sup>78</sup> and had various coinages in their cash reserve, as stated in the audit after the year 166.

From this, we may conclude that, whereas estimating the influence sanctuaries exerted on the economic stability of their regions remains difficult, the ways in which they related to the market can on the other hand be typified. Managerial concerns appear to have been foremost: they had to make the offer coincide with a demand that was constrained by a budget with no room for increases.

Accumulators of goods and consumers of sacrifices, the gods of Greek sanctuaries were likewise financiers, for it was indeed the human economy that influenced the 'sacred economy' and, in short, constituted it. On the financial plane, sanctuaries constituted an extension of civic economies without ever being confused with them. But if it is difficult to define the entity 'sanctuary', and its place in the system of economic stability, it is precisely because it conforms to no obvious economic model. We can perceive a clear-cut difference between the sanctuaries of the Near East, which are units of production and base their economic activities on what they produce, and Greek sanctuaries, which can be defined as units of consumption. It is in this sense that they are connected to the market; the particular nature of this connection is precisely what has deserved to be investigated here.

If the gods contribute to the tying-up of wealth, the financial techniques brought into play in the sanctuaries can be understood at the same time as allowing cities to respond to the demand of funding cultic activity by striving toward the greatest possible financial autonomy for the sacred economies, with a logic centered on the preservation of assets before all else. The involvement of sanctuaries in the economic life of the Hellenistic period moreover went beyond the simple pursuit of self-financing. Through their banking activities, the sacred funds were disposed to respond to the needs of local communities (as much private individuals as the cities that managed them) rather than to penetrate financial networks. At the same time, the management of transactions made by sanctuaries, with very frequent (not to say exclusive) recourse to the tendering process, tended to redefine value relationships that are not necessarily those of the two-way market: tending upward for the rentals and leases that represent the sanctuary's revenues, tending downward for building contracts that correspond to its expenses. With a palette of currencies at their disposal, sanctuaries often had the means to circumvent certain payment difficulties connected with the increasing number of coinage standards.

<sup>77</sup> Bousquet 1988: 117 and 125.

<sup>78</sup> Chankowski 1997.

We can thus consider cities, in cooperation with the sanctuaries for which they were responsible, as having developed genuine public patrimonial organizations: they were safeguarding sacred funds and trying as much as possible to develop them in order to face all the needs of the sanctuary. In this way, they employed these resources as a kind of interface between themselves and the market. By providing credit, adapted to a civilian customer base of middling or humble means by the transaction terms they were able to utilize, sanctuaries were able to act as the hinterland of a market for the smaller cities of the Greek world, which saw them as better tailored to their needs and their ambitions than the great financial, monetary, and economic exchange trends which evolved in the Mediterranean in the course of the Hellenistic age and which they could not control.

In this sense, it is perhaps also through the relations existing between a city and its sanctuary that a conception of the 'market' becomes visible, undoubtedly more complex and ambiguous than the models generated by economic theory, yet at the same time a 'market' understood as a place of exchange and as a founding principle of economic relations.

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## Observations on the Economy in Kind in Ptolemaic Egypt

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In recent years a complex and far-reaching labour of revising interpretations of the Egyptian economy has been undertaken both by some of the scholars who took part in the 2006 Conference at Copenhagen and by many others. They have devoted attention to general features of the Ptolemaic organization of the economy<sup>1</sup> and to its essential character (for example, whether it was part of ‘an’ ancient economy and, if so, according to which system—oriental, mercantilistic, or rational),<sup>2</sup> or have examined more specific aspects. Such

I thank Vincent Gabrielsen for inviting me to this conference and J.K. Davies for introducing me to such a friendly group of scholars and for correcting and revising my English text. Since this paper was presented at Copenhagen in September 2006, a number of important contributions have been published on similar subjects, among which the most relevant, both for size and content, are Bresson 2007–8 and von Reden 2007. In particular the latter study, which I could not know in 2006 but is closely connected to this chapter, is remarkable for its accuracy and wide-ranging documentation, and I agree with the author on most of her conclusions. Nevertheless it may be useful to offer some of the observations and new interpretations which I made four years ago on some papyri which have been quoted also by von Reden, but, obviously, in a different way. This chapter is partly an enlarged English version of Criscuolo 2007.

<sup>1</sup> See esp., beside the bibliography quoted in the following contributions, the article written recently by myself, and above all Manning 2004, 2005a, 2005b, 2006, and 2007. Some of Manning’s contributions deal with the possibility of using the New Institutional Economics for creating an interpretative model of the Ptolemaic economy, even envisaging a tendency toward a federal state (see Manning 2004: 761). However, on the so-called ‘Ptolemaic economy’ I make one remark: we should be very careful and precise in the extent to which we equate ‘Ptolemaic state’ with ‘Ptolemaic Egypt’ (see Manning 2006: 259 ff.), because the economic system of Ptolemaic Egypt does not represent *ipso facto* the economy of the whole kingdom, even if it comprised the largest amount of territory, population, and resources (see Criscuolo 2007: 56 and n. 3). Yet the political weight of this part of the Lagid kingdom was often, and particularly in the third century, much less relevant than its other so-called outside possessions, even though we cannot evaluate their economic position or assess the influence that their economies had on central decisions and initiatives. These aspects are still to be investigated.

<sup>2</sup> Von Reden 2006: 161–77.

aspects have included monetization and the consequent development of a sort of superstructure erected on top of the traditional economy of the country, created by a monetized fiscal system and by a lease-system for monopolies.<sup>3</sup> The portrait drawn of the Ptolemies is generally that of a foreign dynasty, followed by a huge stream of Greek-speaking people, in desperate need of identifying commodities, mainly but not only wheat, which could be sold abroad, in order to procure as much silver as possible. Thus it is agreed that from the Ptolemies onwards the Egyptian economy was monetized. However, more or less explicitly this portrait has normally given the Egyptians a passive role in the economic development of Hellenistic Egypt, while the dynamics of changes, even in exploitation, were credited to the Greeks. Such a theory is particularly strong in the matter of management of agriculture, where Egyptians represented, according to the *topos*, the efficiency and self-sufficiency of the pharaonic tradition, a constant for thousands of years. In contrast, in the *chōra* the Greeks, or the Greek administration, played the role of colonials, essentially uninterested in the organization of the land, unless it compromised its rentability.<sup>4</sup> They were dominated by the logic of traditional systems whose success, in terms of production, was enough: their affair was its evaluation and transformation into coined money.

In this chapter I aim to consider whether the following assumptions are valid or misleading: (1) that the Egyptians either remained, or tended to remain, devoted to an economy in kind, only lightly touched by increasing monetization, and always under fiscal pressure, while (2) the Greeks, whether in Egypt or abroad, were the main recipients of any provision taken by the central administration involving the use of money.<sup>5</sup> I shall examine them from two perspectives: first whether the countryside did or did not tend to use agricultural products as money, and secondly the hypothesis that such a use was preferred by the Egyptians. As already observed by Briant, for a similar reality ‘une opposition aussi tranchée entre économie dite naturelle et économie monétaire relevée d’une vision grecque qui simplifie outrageusement le mécanisme des échanges de biens’<sup>6</sup> and, I would add, the mechanism of their evaluation as well. But it is a vision still very popular among scholars.

<sup>3</sup> Criscuolo 2007: 55–70; but more importantly and comprehensively von Reden 2007, also including a wide bibliography on the Ptolemaic economy.

<sup>4</sup> An exception is commonly considered to be the management of *doreai*, such as that of the *dioiketes* Apollonios, which are considered to be ‘a means of providing revenue for the king and his circle’ (cf. Manning 2006: 261). I do not wholly accept this definition, but I will discuss it elsewhere.

<sup>5</sup> For a more prudent (if not primitivistic) use of categories based on modern conceptions of money and monetisation in Classical Greece, see Schaps 2004, esp. 150–221.

<sup>6</sup> Briant 1996: 417–18. On the other hand in Egypt, exactly as in Rome, we find examples of activity, that is of management of assets in kind run by banks, though it was rare and probably due to particular circumstances (cf. Bogaert 1988, esp. 223).

The main issue is the so-called monetary use of wheat. Papyri have often been presented as proof that such a phenomenon was typical: I shall present a reading of some of them and of some other texts, in order to test if their current interpretation is still acceptable.

In *P. Lond.* VII 1994–5,<sup>7</sup> *P. Cairo* V 59825, all from the Zenon archive (third century BC), *P. Tebt.* III 832 (second century BC), and *SB XVI* 12675 (probably 100 BC) other products, or even money, appear to be related to wheat according to different values: *prima facie* wheat would actually seem to play the role of an exchange tool, especially in the papyri of the second century. *P. Lond.* VII 1994 and 1995, together with *P. Cairo Zen.* II 59292, are accounts of grain put at the disposal of Herakleides over a period of three years.<sup>8</sup> The deliveries were made for a number of different purposes, e.g. sowing, but also as a form of payment to cultivators, etc. For the editor, T.C. Skeat, Herakleides as *myriarouros* was the chief farmer of the *dorea* of 10,000 *arourai* owned by the *dioikētēs* Apollonios, while I consider him as an official in charge of the drainage and first exploitation of a fixed extension of land. For Skeat the object of the account was to define the position of the *myriarouros* in relation to his employer; for me it was intended to justify, within the administration of the *dorea* but perhaps also vis-à-vis the royal treasury, some heavy losses and to throw some responsibility onto a state official. However the documents were written in and for a Greek milieu.

It appears that each year Apollonios sent out a memorandum specifying the amounts of various grains for sowing, which were to be placed by the granary of the *dorea* at the disposal of Herakleides. While the amounts remained the same for three years, in fact the actual quotas changed, though the value was calculated by the granary in terms of wheat, so any excess issues were set off against the deficits. Eventually the net total, expressed in wheat, was compared with the total value (also in wheat) of the quotas, and a balance was struck in order to show whether Herakleides was in credit or debit overall. The contents of this long roll of accounts were set out by the editor in a series of Tables. Here it is quite clear that, despite the *hypomnēma* sent by the *dioikētēs*, the seeds given to Herakleides did not correspond to the amounts fixed. What is even more important is that Herakleides received less wheat than planned. Nevertheless, he gave it back regularly: the losses were due to other kinds of grains, especially barley and the oil seeds (whose equivalences to wheat were particularly unbalanced), which were given to him in a higher quantity and not returned. This is quite interesting because we know that in the Revenue Laws it was stated not only that *doreai* could keep their oilseeds, but also

<sup>7</sup> See most recently von Reden 2007: 85, and, with a strong assertion of the monetary use of wheat, Foraboschi and Gara 1982: 71.

<sup>8</sup> I quote essentially the description given by the editor of *P. Lond.* VII, T.C. Skeat, who provided a splendid edition of these long and complicated papyri.

that the price for oilseeds paid by the state to them was 2 dr. per artaba more than to other farmers. It therefore appears quite understandable that the local administrators of the granary of the *dorea* tended, on the one hand, to concentrate on guaranteeing the availability of wheat, since that was the primary interest both of the state and of their master Apollonios and could be sold on the free market. If on the other hand some speculation in oilseeds was perhaps attempted, the deficit balance of outcome and income could be better hidden by manipulating its equivalents with other grains (as happened in the first two years, when a surplus of oilseeds compensated for a loss of barley). The main target in any case was to keep and procure as much wheat as possible.

What, in my opinion, can be excluded is that the accounting of Apollonios' *dorea* granary can show us the survival of pharaonic practice. The equivalence of different seeds with wheat did not have an economic or 'monetary' function, but was directed towards justifying an internal 'granary budget'. There are other reasons for that conclusion too: the *ratio* which we find between wheat and barley, which is 1 : 0.6, is the same as in other official documents of the second century BC,<sup>9</sup> and it appears to be fixed in Alexandria.<sup>10</sup> It is therefore startling to find in another (apparently private) third-century text, *P. Gurob* 29,<sup>11</sup> a different *ratio*, yet more favourable to wheat, of 1 : 0.5, but the grain which seems to be the equivalent is barley, not wheat. In this case, therefore, the equivalence did not arise from an absolute or general use of grains in accounting, but was connected to a specific need, on the part of that manager, for expressing outcomes in terms of barley.

Another example claimed to be of the use of wheat instead of money is *P. Cairo Zen.* V 59825 (24 May 252 BC). This is a duplicate document, the first one being an abstract of the second which is in the form of a letter.<sup>12</sup> Zenon orders various payments to be made to the banker Artemidoros: the upper text, an anonymous order, is an abstract, and is much more accurate than the lower text. The first text mentions payments 'to Pyron as clothing allowance for the 34th year 30 dr.; and, on paying his salary for Phamenoth, Pharmouthi, Pachons, enter as deduction 62 dr. 3 ob. for 60 artabai of wheat, 20 dr. for 15 minai of wool, and the travelling allowance of 8 dr.', while in the second one

<sup>9</sup> See below, p. 171 with n. 17.

<sup>10</sup> The same ratios for barley and olyra can be found in *P. Hib.* I 85 (261 BC) or *P. Hib.* I 119 (260 BC); for the latter see von Reden 2007: 122–3.

<sup>11</sup> *P. Gurob* 29, lines 19–24: ἐχει Θωὺθ [κρ(ιθῆς) 1] | Φαῶφι κρ(ιθῆς) 7, πυ(ροῦ) 1 | Ἀθὺρ κρ(ιθῆς) 8 | Χοιάχ κρ(ιθῆς) 11 12 | (γίνονται) κρ(ιθῆς) 27 12, πυ(ροῦ) 1 αἰ κρ(ιθῆς) 2, | (γίνονται) κρ(ιθῆς) [29 12]. Lines 44–8: ἐχει Θωὺθ κρ(ιθῆς) 5 | Φαῶφι κρ(ιθῆς) 32 | Ἀθὺρ κρ(ιθῆς) 30 | Χοιάχ κρ(ιθῆς) 63 12 | (γίνονται) κρ(ιθῆς) 130 12, πυ(ροῦ) 23 αἰ κρ(ιθῆς) 1 13.

<sup>12</sup> From the photograph in Plate VI of the edition, the second part of the order seems to have been written first, so the structure of the texts could easily include a different distribution of the amounts.

we find a deduction from the salary, for wheat delivered to him from the granary of the *dorea*, of 50 dr. for 60 artabai and for two different amounts of wool, the deduction amounting in total to 33 dr. 2 ob. The editors of the papyrus, Gueraud and Jouguet, left unexplained the difference between the two figures for the price of wheat (line 6: 62 dr. 3 ob.; line 31: 50 dr.) and the different amounts for the price and the quality of wool (line 6: 20 dr. for 15 minai; lines 32–4: 13 dr. for 10 minai plus 20 dr. for another 10 minai) unexplained. In order to explain the inconsistency of the figures, Gara proposed to consider this text as a proof of the use of wheat as the actual object of the payments, the money being only an accounting tool, one which was moreover used inaccurately.<sup>13</sup> However, if we look carefully at the text we notice that the puzzle arises because the supplement of 60 artabai of wheat in line 31 has simply been repeated from line 6 without considering the difference between the total sums (62½ dr. against 50 dr.): but as the quantity of the wool was higher in lines 32–4, the amount of wheat could easily be lower, for example 52 artabai. As there are other lacunae, and as the papyrus lacks the final figure of the second part (which probably had to be the same as in the first one), it is possible that the figures in the lacuna were slightly different (like the two sums of wheat and wool, 80 dr. *versus* 83), though giving the same total. And again wheat clearly did not play the role of money; it was simply part, as usual, of the salary of Pyron, a salary which, as attested in another text,<sup>14</sup> is likely to have been much higher than 10 dr. per month.

Now we find a similar situation if we consider some documents, public or private, of the second century BC. A good example is given by UPZ I 14 (157 BC), a long dossier belonging to the archive of Ptolemy son of Glaukias. Ptolemy has sent a petition to the king in order to get a position in the army for his brother Apollonios: the king has accepted and authorized the request. Apollonios is enrolled on the same conditions as other soldiers assigned to the Memphis garrison, that is a salary fixed in cash and kind at '150 dr. and 3 artabai of wheat, of which 1 artaba in wheat and the other 2 artabai at the equivalent of 100 dr. each'.<sup>15</sup> The *adaeratio*—and that at a very low price—is here applied by the king: either because there existed a special market for military men, as in Roman times, or it was a pure speculation made by the royal administration. In either case the logic was to spare wheat as long as possible.

<sup>13</sup> Cf. Gara 1988: n. 23.

<sup>14</sup> Cf. Criscuolo 2007: 64 with n. 26 for the puzzling relationship between Zenon and Pyron, whose salary in cash, mentioned also in another papyrus, *P. Cairo Zen.* IV 59647 (n.d.), apparently of 10 dr. plus 3 artabai of wheat, had increased at least to about 20 dr. per month, since the deduction for 3 months had to be of more than 60 dr. for wheat alone. Otherwise the order would be meaningless. See also, though again in a more 'traditional' perspective, Foraboschi 2008: 41–2.

<sup>15</sup> Lines 43–50. The papyrus, lines 70–3, also mentions a sort of supplementary amount 'after each year' of '1 artaba of wheat and for the rest 100 dr. per artaba'.

*P. Tebt.* III 832 and IV 1129 (but there are other texts as well) are likewise official documents, one probably from Oxyrhynchos, one from Kerkeosiris, which give equivalences between wheat and other products and even with money.<sup>16</sup> Some equivalences are the same as in the third century (barley is 0.6 of wheat), while others have changed (sesame is worth 700 per cent more than wheat; in the third century it was 600 per cent). Again, the accounting of money in terms of wheat has been considered by some scholars to be a consequence of an economic system based on agricultural exploitation:<sup>17</sup> as with many taxes, the rents of the land were fixed in wheat, but payments in other grains or a pure *adaeratio* were regularly accepted by the authorities, even (perhaps surprisingly) on an equitable basis. In *P. Tebt.* III 832 it is in fact possible to calculate the price of wheat: 130 'units of copper', *chalkoi* (coins of 20 dr., i.e. *deben*), which correspond to  $6\frac{1}{2}$  artabai, give a price of 400 dr. per artaba of wheat, which seems very low.<sup>18</sup> A similar situation is attested in *P. Tebt.* IV 1129, col. II, line 33, and col. III, lines 56–7, an official account of rents from Kerkeosiris dated 123 BC, where we find payments of rents made respectively both in cash and in products other than wheat. I therefore doubt that it is entirely acceptable to say that 'the persistence of taxes and private rents in kind constitutes the most obvious limitation on the monetization of the agrarian economy'.<sup>19</sup> In fact, in these documents it is possible to find the same features as in the third century: the central administration required, and tried to procure, a regular income in wheat, while at the same time it supported the cultivation of monopolised produce such as oilseeds for oils and barley for beer, and possibly combed through the surplus, trying to discourage less profitable cultivation. Yet on the whole we should admit that, according to these documents, the state administration was as interested in receiving money—from an *adaeratio* convenient to farmers or from taxes on monopolized products—as it was in collecting wheat. So for the peasants, who were mostly Egyptian, it might be more convenient, depending on varying economic situations, to pay in kind, if the harvest was abundant, or

<sup>16</sup> Here is the translation of *P. Tebt.* III, 832, lines 1–4, the beginning of a land survey, given by the editors: 'son of Petosis son of Pha ( ):  $8\frac{1}{4}$  arurae 41 artabae; of these,  $3\frac{3}{4}$  in Hephaistiou, of which  $3\frac{1}{4}$  sown with wheat,  $\frac{1}{2}$  with barley, in Chr ( )  $4\frac{1}{2}$  of which 3 sown with wheat,  $1\frac{1}{2}$  with hay, total  $8\frac{1}{4}$  of which  $6\frac{1}{4}$  in wheat,  $1\frac{1}{2}$  in hay,  $\frac{1}{2}$  in barley, making  $8\frac{1}{4}$ ; of these (the hypothetical rent) is  $26\frac{1}{2}$  art. of wheat,  $1\frac{2}{3}$  of barley = 1 of wheat, 1 of sesame = 7, 130 units of copper =  $6\frac{1}{2}$ ; according to the crops sown,  $6\frac{1}{4}$  arurae in wheat, rent  $30\frac{11}{12}$  art.,  $1\frac{1}{2}$  in hay, rent  $7\frac{7}{12}$ ,  $\frac{1}{2}$  in barley, rent  $2\frac{1}{2}$ ; total  $8\frac{1}{4}$  arurae 41 art; seed  $8\frac{1}{4}$  art. of wheat.'

<sup>17</sup> See Gara 1984: 130–1.

<sup>18</sup> On this price and the use of *deben* in calculating the *adaeratio* see the commentary by J. Shelton to *P. Tebt.* IV 1104, line 2. The same phenomenon, of a lower price for wheat *adaeratus*, is attested in demotic texts, cf. Clarysse and Lanciers 1989: 119.

<sup>19</sup> Rowlandson 2001: 147. On the other hand, von Reden (2007: 152) seems to accept that in the second and first centuries BC goods 'as a means of payment regained importance because of the declining trust in coined money'. Distrust is probable, but it was not sufficient to demolish the structural function of money, either in accounts or in actual payments.

conversely in cash, if the yield could make a better profit on the market that way. In any case it is quite evident that only a radical assimilation of the monetary system within the management of agricultural exploitation can explain such documents. Moreover, in the same text we can find three different prices for wheat, probably depending on different qualities or seasons or even on its status as a gift.<sup>20</sup> That would obviously create many problems in the case of pure calculations in kind.

In private accounts we find similar equivalences. SB XVI 12675 is a very inaccurate account of expenditures in money and in kind. In the *recto* of this papyrus we find a total amount of drachmai which corresponds to  $2\frac{5}{6}$  artabai of pyros, at a price of 1080 dr. If the price were that fixed at Alexandria in silver drachmai, it should be from 1 to 2 dr. per artaba, which would give a price in bronze from 1080 to 540 dr., thereby providing an approximate bronze : silver ratio as well.<sup>21</sup> What follows seems to imply that the amount of wheat had to be calculated as a part of a salary fixed at  $\frac{1}{6}$  artaba of wheat per day, which the Egyptian carpenter Petermouthis had to pay to some Egyptian contractors. Again, the *recto* of this papyrus has been used by scholars to support the idea that every economic value, along with most of the actual exchanges in the *chora*, was expressed in wheat. But the *verso* of the same papyrus itself shows, in my opinion, that this cannot be true: the conclusion of the account is expressed in money, and salaries, fixed in kind and in cash, were actually calculated, and probably paid, in cash, as in the third-century orders of payments by Zenon.

Another relevant group of texts, which are usually considered as a proof of the major importance of the economy in kind in Hellenistic Egypt, is that of loans in kind.<sup>22</sup> It is well known that the interest for these loans was normally 50 per cent and was generally included in the sum that had to be returned by a certain date, the inclusion being denoted by the expression *atokos*. The vast majority of the loans in kind from the Ptolemaic period are of corn. They were mostly stipulated in Choiak (about November), that is a month of the sowing season, and had to be returned on harvest, in Pachon or at latest in Mesore (from April to July). However, the economic relationship between borrower and lender is more balanced than appears at first sight. Through the loan the borrower could procure a larger amount of seed, perhaps in order to enlarge the area of land sown, and could pay an actual interest of 5 per cent (10 artabai sown normally produced a harvest of 100 artabai). The lender could then bargain away seed that would presumably otherwise rot, and would receive an actual 50 per cent of fresh wheat more after only 5–6 months.

<sup>20</sup> Cf. Verhoogt 2005, App. II: 210 ff.

<sup>21</sup> See Gara 1984: 131. If the official price was 1200 bronze dr. per artaba in this period (see below, p. 173 with n. 25), this equivalence was made on a rather lower value, so that the resultant salary was also lower.

<sup>22</sup> See now von Reden 2007, esp. 151–2 and the relevant chapter.

A similar situation is documented by *P. Dryton* 16 (4 Jan. 131 BC, from Pathyris, in Upper Egypt) and *P. Dion.* 20 (10 Jan. 105 BC, from Akoris in Middle Egypt), the only difference being in the penalty stated in case of default. In the case of the loan by Dryton's wife Apollonia, also called Senmontis, the debtors would have to pay a sum 50 per cent more than the corresponding market price for a loan of 35 artabas of wheat.<sup>23</sup> On the use of this form of *parachrēma*<sup>24</sup> the editor, Vandorpe, states in her commentary that in this case too the fine would consist of money resulting from the market price 'if higher than the amount borrowed increased by 50%'. I do not think that such a choice was given here to the borrower. The fine had to be specified in money in case the borrower could not return the loan in kind, and the mention of 'market price' probably meant that this price was usually higher than the official one. Furthermore, in *P. Dryton* 16 the editor inserted into her translation an 'or': 'they shall return (the 35 artabas) increased by 50% (or) the current market price'. The word 'or' is not in the text and does not make much sense. If we retain a literal translation, then in this papyrus, as in *P. Dryton* 25, *P. Grenf.* I 28 (but in lacuna), and in other documents such as *P. Lond.* II 218, 15, the penalty is directly stated in money, so that the lender Apollonia seems to be interested more in money than in wheat, at least for these transactions. On the other hand, it was specified in the case of Dionysos son of Kephalas that he should pay a forfeit of 3000 dr. per artaba borrowed, that is  $2\frac{1}{2}$  times the 'official' price of an artaba, which was 1200 dr.<sup>25</sup> As we do not know how high, or low, the price of wheat on the market could have been, and as moreover we cannot know what was taken as the accounting date, we cannot compare the severity of the penalties in these two deeds. But what is clear is that, on the one hand, the practice of borrowing seeds on the 'private market' was obviously quite common, as in the rural economy of any period, and on the other hand, that in real terms the economic exploitation and control of this practice was confined to money, the only medium which was able to guarantee a correct and constant evaluation of the investment. And what is relevant to our point, the deeds were stipulated in an Egyptian milieu, the Egyptian towns of central and southern Egypt.

The last documents I wish to examine are leases of land combined with loans, both from Tholthis, a small village in the Oxyrhynchite nome.<sup>26</sup> In both

<sup>23</sup> *P. Dryton* 16, lines 19–22: ἐὰν δὲ μὴ ἀποδώσ[ι]ν ἐν τῷ ὀρισμένῳ χρόνῳ, ἀποτεισάτωσαν παραχρῆμα ἡμι[ό]λιον τὴν ἐσο[μ]ένην ἐν τῇ ἀγορᾷ τιμὴν.

<sup>24</sup> Attested also in *P. Dryton* 11, line 118, where the *parachrēma* can be either a simple *hemiolion* in kind or 150 per cent of the market price of the amount of wheat borrowed.

<sup>25</sup> *P. Dion.* 20, lines 22–4: ἐὰν δὲ μὴ ἀπο[δῶ]σιν [καθ' ἃ γέγραπται, ἀποτεισάτωσαν τιμὴν] ἐκάστῃς ἀρ[τ]άβης χαλ[κοῦ] [δραχμὰς τρισχιλίας καὶ μὴθὲν ᾗσσουν; and see the commentary of the editors, 17–21.

<sup>26</sup> On these documents see now also von Reden 2007: 186–7; not relevant to this discussion is the fact that these leases might or might not include the provision of seed for the land rented (cf. *ibid.* 207).



cases the land was leased by cleruchs, and the rent had first of all to cover the rent in kind due to the state. This is particularly evident in the first papyrus, *P. Frank*. 1 (Jan.–Febr. 213 BC), which is however a sort of antichretic lease of a whole *klēros* of 30 arourai. Its rent is identical with the *diartabieion* that had to be paid for it, viz. 60 artabai of wheat, so it was certainly quite favourable to the lessees.<sup>27</sup> Nevertheless, it is noteworthy, first, that the fine for the lessee Neoptolemos, in case of default, was extremely high (10 dr. per artaba, certainly a consequence of an assessment of the risk of loss of the *klēros* by the tenant Apollonios). However, on the other hand it also deserves note that if the debtor-lessor could not return the sum lent (60 dr.) before the expiry of the lease deed, the creditor-lessee could deduct from the rent in kind (60 artabai) the amount of wheat whose price on the threshing-floor would be equivalent to the loan. Hence, if the price were, as it probably would be, slightly higher than 1 silver dr. per artaba (the official price?), the creditor would get his loan repaid plus a certain amount of new credit (that is interest) on the rent in kind. Again it was the monetization of the value of wheat that generated a form of potential speculation.

Even more interesting, as a lease, is *BGU X* 1943 (215/14 BC).<sup>28</sup> In this text Pyrrhos sublets a part of the *klēros* of a certain Hermias to two men, one Greek, Klados, and one Egyptian, Phamounis. The rent is fixed at 8 artabai per aroura, seed included, that is presumably a net rent of 7 artabai, on an extension of a *klēros*, not yet delimited by the *geometrai*, and therefore probably a fallow area (if the supplement *ἀνάπαυμα* in line 5 is correct) which was to be sown with wheat. As nothing is said of the rent due to the state, this should imply a theoretical yield of 2 art. for the lessees (10 art. of harvest per aroura, less 8 for the rent), and for the lessor one of 5 art. per aroura (8 art., less the rent of 2 art. to the crown, and less 1 for seed). Hence, if Pyrrhos had to pay the *diartabieion* per aroura to his lessor Hermias (as in *P. Frankfort* 1, for instance) or even 1 or 2 artabai more, his net profit, as a pure investment, would be from 1 to 3 artabai per aroura. But the advantage for the two lessees was very small, indeed too small. Why would they lease land under such conditions? We can of course only speculate, but it is tempting to imagine a hidden loan of money from Pyrrhos to Klados and Phamounis, whose return was to be in kind, (I would guess) in work in bringing his land back into cultivation, and in paying his rent to Hermias fully plus a profit. If however Pyrrhos could not keep the land at the disposal of the two lessees (against possible claims by Hermias?), the fine, *epitimon*, would be in cash (line 18), so a balanced combination between monetary/agricultural needs and resources is again documented. What is *not* attested is any link between ethnicity and medium of payment.

<sup>27</sup> Cf. Bingen 1978: 77.

<sup>28</sup> See now on this text, mentioned as a 'flexible contract', von Reden 2007: 128 n. 29.

To sum up: in Ptolemaic Egypt, the interrelationship between an economy in kind and a monetary economy was much more developed and intricate than is commonly stated, and involved Egyptians as well as Greeks. As von Reden has written, 'In a tense coincidence of presence and absence, money was a crucial social bond between central and local authorities, Greeks, and Egyptians, lenders and borrowers, as well as taxpayers',<sup>29</sup> and this, I might add, despite the fact that money often played only the role of accounting unit.<sup>30</sup> Even though the social history of the Egyptian part of the kingdom certainly had to deal with established ethnic identities, divisions, and even social discriminations, and often could not cope with them, economic life could not share out incomes and outcomes, profits and losses, ability or luck, by *ethnos*. As the Mediterranean ambition of the new rulers compelled them to measure, transform, and often transfer their wealth-in-kind into coin, it was paradoxically the very predominance of agriculture in the Egyptian economy which allowed and compelled the Egyptian population to enter definitively the wonderful world of money.

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<sup>29</sup> See von Reden 2001: 74.

<sup>30</sup> Von Reden 2007: 77. To be paradoxical: these days we use less and less cash, but money certainly remains the standard measure of economic value.

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## The Well-Balanced *Polis*: Ephesos

JOHN K. DAVIES

### THE ‘METEORIC RISE’<sup>1</sup> OF A HELLENISTIC CITY

The purpose of this chapter is to offer a micro-economic case study of the way in which a single city successfully sustained its existence and impetus within the post-Alexander economic world. Its leitmotif<sup>2</sup> is ‘balance’, whether between revenue and expenses, between autarkic subsistence, a command economy and price-setting markets, between ‘lay’ and ‘sacred’ economies, between autonomy (fiscal and political), euergetism, and debt, between social classes, economic or other interests, and legal statuses, or the fluid, fraught, but inescapable symbiotic balance between cities and royal regimes. That last aspect has long attracted attention,<sup>3</sup> mainly focused on well-documented areas (especially on western Asia Minor), and mostly drawing a composite, and often somewhat bleak, picture of the region.

To focus on this one city might therefore appear rash, for ‘Ephesus has yielded very little evidence relating to Hellenistic times’; ‘all our evidence about Hellenistic Ephesus is very poor’. Thus, all too accurately, Rostovtzeff in 1941, recently echoed by Peter Scherrer.<sup>4</sup> True, the inscriptions of Ephesos in the *IK* series<sup>5</sup> are now

<sup>1</sup> ‘Ihren komethaften Aufstieg’ (Knibbe 1998: 97).

<sup>2</sup> I thank Vincent Gabrielsen and Graham Oliver for suggesting the initial idea of this paper, and Gary Reger for early sight of Elton and Reger 2007. For references and emendations I owe great debts to John Ma, to my co-editor Vincent Gabrielsen (also for much wholesome and constructive advice), to Dr Sabine Ladstätter, and especially to Dr Elisabeth Trinkl (Vienna), who of her kindness provided a mere acquaintance with a treasure-house of information: to her my most profound and grateful thanks. This paper is not a history of Hellenistic Ephesos, great desideratum though that is.

<sup>3</sup> A full bibliography would be tedious and needless: the essentials in Ma 1999 and Dmetriev 2005, with structural analysis in Davies 2002.

<sup>4</sup> *SEHWW* 175 and 1280. Scherrer 2001: 66: ‘Inside the city we know very few monuments of Hellenistic date, since most excavations stopped at Roman levels or failed to reveal earlier layers.’

<sup>5</sup> *Inchriften griechischer Städte aus Kleinasien* 11–17 = *Die Inschriften von Ephesos* I–VIII (Cologne, 1979–84), with periodic supplements and amendments in *JÖAI*, reported in *SEG*. German-language publications tend to cite the collection as *IVe*, while *SEG* prefers *I.Eph.*; the latter

accessible, while the ever-richer archaeological evidence is helpfully summarized in several recent surveys,<sup>6</sup> but the emphasis throughout has lain on the later history of the city from Augustus onwards, so that the Tetragonos Agora remains the only monument of the Hellenistic period to have been excavated in detail.<sup>7</sup> Nonetheless, Hellenistic Ephesos deserves study for two reasons. First, to follow the fortunes of a single city and its *chōra*, identifying the main processes at work, is the only way of deconstructing regional generalizations which may conceal wide variations. Secondly, and specifically for Ephesos, something important needs explanation. Her tribute payments in the fifth century BC, oscillating between 6 and 7½ T till 434, show her as one *polis* among many: even within the Ionian district she stood well behind Kyme (12 T, later 9) and just ahead of Teos (6 T) and Miletos (5 T); over a dozen other cities in the Athenian *archē* were rated higher.<sup>8</sup> True, some towns in what was later firmly Ephesian territory were separately assessed, but since that was true for other members of the *archē* as well the figures should reflect relative size and prosperity with some accuracy. Yet by Strabo's time she was already the greatest *emporion* of Asia, growing daily,<sup>9</sup> and was to have a spectacularly successful future until well into the Byzantine period. Understandably, in the light of her later history and its lavish documentation, scholarly attention has concentrated very largely on the post-Attalid period,<sup>10</sup> but the roots of that economic development lay much deeper. Accordingly, this chapter concentrates on the period before 133 BC, using later evidence only when it can plausibly be applied to earlier circumstances. Such a focus helps to reveal how well a city community, though situated in a hotly-disputed area of the Hellenistic world, could keep itself in balance (in all the above senses) both within its own borders and in relation to the wider world, and could move up from second to first rank.<sup>11</sup>

is followed here. Inscriptions published in the main series are cited in **bold**, with the volume number added for the reader's convenience. A list of *Konkordanzen* (1983), compiled by J. Nollé, is inserted in VIII,1, *sub fin.*, and a slim volume *Addenda et corrigenda zu den Inschriften von Ephesos I–VII,1 (IK 11,1–17,1)* (eds. R. Merkelbach and J. Nollé) pub. 1981 is cited as '*I.Eph. VII,1 Addenda*'. Volumes of *Forschungen in Ephesos (FiE)* are cited as author/date in Harvard style.

<sup>6</sup> e.g. Alzinger 1970; Karwiese 1995; Koerster 1995; Hueber 1997: 34–38; Knibbe 1998; Friesinger and Krinzinger 1999; Scherrer 2000; Meriç 2002; Kraft et al. 2007. Wohlers-Scharf 1995 provides a detailed narrative of the course of the excavations of the city: more summarily Wiplinger and Wlach 1996.

<sup>7</sup> Brief report in Scherrer 2001: 66–8. Epigraphic evidence adds a gymnasium (Keil 1951; Engelmann 1993), of which there were already several in 395 (Xen. *Hell.* 3.4.16).

<sup>8</sup> Figures for Ephesos in Rubinstein 2004: 1071b; for other cities Meiggs 1972: 538–561, with 529–30 for a comparative table.

<sup>9</sup> 12.8.15, describing Apameia as a great *emporion* of Asia, second only to Ephesos, with 14.1.24 for the qualification 'this side of Tauros'.

<sup>10</sup> Like Magie 1950: 885 n. 84 and Cohen 1995: 177, I have not seen Black n.d. No chapter in Brannon and Descat 2001 is devoted to the city, though there are many passing references.

<sup>11</sup> Thus I do not discuss the evidence of late second-century disruption reported by Lawall (2005: 213–15), or the longer-term effects of Roman manipulation of Rhodes and Delos after 166. For assessments of the Roman impact on late Hellenistic Asia Minor, imprimis Ephesos, see now the papers in Meyer 2007, esp. Kirbihler 2007: note also Kirbihler (forthcoming).

The task is elusive. First, the epigraphic documentation is thin and patchy. As at Samos across the strait, we have a mass of decrees from the Successor years conferring honorary citizenship, mostly via uninformative formulae even when the decision whom thus to honour was highly political. Precious little else is epigraphically useful until the Augustan period, apart from the two great debt laws, the first now dated in or just after 300,<sup>12</sup> the second in 86/5,<sup>13</sup> and the more recently published Customs Law;<sup>14</sup> even this last, for all its importance, says little about Ephesos itself. Spasmodic references in literary sources help a little, but it is mainly Strabo's use of the local historian and geographer Artemidoros which makes the task intractable rather than impossible.<sup>15</sup> The methodological challenge is more intractable still, for the problem will not yield to simple procedures of assembling the available information. Similarly, conventional approaches within economic history, whether using the triad production–distribution–consumption or the tetrad land–labour–materials–money, offer little hope of satisfactorily encapsulating the salient features and peculiarities of Ephesos or her *chōra*. All that can be done is to identify the main processes and boundary conditions which together moulded the city's situation and history.

## SHRINE AND CITY

For much of her early history Ephesos gives the impression of having been first and foremost a cult-centre, comparable as a *polis* far more to Delphi than to communities which hosted a plurality of cult-sites and honoured many deities: Dieter Knibbe, indeed, at one point roundly calls her a 'temple-domain dependent on the powerful hierarchy of the Artemision'.<sup>16</sup> Other gods and other sanctuaries are indeed visible within her urban and rural space, but the Anatolian Great Mother in her Hellenized form as Artemis had an overwhelmingly preponderant presence.<sup>17</sup> The history of the cult and the sanctuary is not of

<sup>12</sup> *I.Eph.* Ia 4 = *SIG* 364 = Asheri 1969: 44–7 no. XXII and 108–14, with Walser 2008.

<sup>13</sup> *I.Eph.* Ia 8 = *SIG* 742 = Asheri 1969: 71–3 no. XL and 114–17, with Walser 2008.

<sup>14</sup> *SEG* XXXIX 1180, with references to recent work in LI 1574 and LII 1130, now encompassed in Cottier et al. 2008.

<sup>15</sup> The surviving fragments of the local historians of Ephesos fill a mere two pages of Jacoby (*FGrH* 417–420, Artemidoros having been banished among the geographers as *FGrH* 438). Lost sources include Demokritos of Ephesos, *About the temple in Ephesos and the city* (*FGrH* 267 F 1), conjecturally dated in the second half of the third century BC (thus Jacoby), and Baton of Sinope (late third century?), *About the tyrants in Ephesos* (*FGrH* 268 F 2–3).

<sup>16</sup> 'Eine von der mächtigen Hierarchie des Artemisions abhängige Tempeldomäne' (Knibbe 1998: 93).

<sup>17</sup> No survey of the Artemis cult is possible here: cf. Fleischer 1973 and 1978; Oster 1987 and 1990: 1699–726; Burkert 1999 (but also Scherrer 2007: 325, with n. 18); Sherwin-White 1982 for a Persian dimension. For other deities Büchner 1905: 2804–6, updated by Knibbe 1978, Höbl 1978: 16–18 (a Sarapeion by the mid-third century), Merkelbach 1980 (Hestia), Börker 1981: 187

immediate relevance here, nor directly are the successive rebuildings of the temple, though construction and maintenance have obvious economic implications.<sup>18</sup> More pertinent, because stable and long-term, are the activities which the Artemision generated. Seven are salient.

First and foremost, *the land-holdings of the shrine* were very substantial. True, the evidence in the form of *horoi* marking the boundaries of Artemis' estates is of Augustan date or later,<sup>19</sup> but it yields a consistent (though unquantifiable) picture (Fig. 9.1) which, given the Augustan emphasis on return to normality, is likely to have reflected the *status quo ante*. Regrettably, the best evidence of the estates' yield in cash or kind is of Imperial date, in the form of references to 'merchants in charge of the taste', i.e. men who sold the wines from the temple estates:<sup>20</sup> one may tentatively link the emergence of that trade to the growth of local amphora production, whether of the Nikandros group from the early third century BC or from other workshops.<sup>21</sup> To such production we may add the sacred herds known to Xenophon (*An.* 5.3.9), the sacred deer on an island near Klaros (Strabo 14.1.29, 643C), and the yield of the two lakes, Selinousia and another, which Strabo (14.1.26, 642C) identifies as 'affording great revenues' to the goddess and seems to locate north of the Kaystros estuary. It thereby becomes comprehensible how the Ephesians could envisage mortgaging such income, for generations if need be,<sup>22</sup> on the construction of successive temples and ancillary buildings. The only piece of evidence for how such extensive estates were acquired is a story that Kroisos as king dedicated to the goddess the estate of 'the richest Lydian', the merchant Sadyattes, who had been unhelpful to him as crown prince:<sup>23</sup> given that the story comes via Nikolaos from (presumably) Ephoros, its reliability is not beyond reproach, but the form of the transaction, forced or voluntary *aphierōsis*, is well attested elsewhere.<sup>24</sup>

n. 30, and Simon 1986: 27–53. Cf. also *I.Eph.* II 101–4 (Zeus Patroios and Apollo Patroios), 105 (Asklepios), 106 (Dionysos and Enedra), 107–9 (Meter Oreia), and SEG XXXIX 1203 (Apollo Patroios) as well as the rich cultic documentation of the Roman period in *I.Eph.* IV 1201–1271.

<sup>18</sup> Detailed surveys in Bammer 1972 and 1984, and in Bammer and Muss 1996.

<sup>19</sup> *I.Eph.* VII,2 3501–16, with Knibbe et al. 1979. *I.Eph.* V 1523–4, of 6/5 BC, referring to Augustus' reinstatement of 'sacred roads and canals of Artemis', imply previous investment in communication facilities on the part of city or sanctuary.

<sup>20</sup> οἱ ἐπὶ τὸ γεῦμα πραγματευόμενοι, *I.Eph.* III 728, with VI 2076 and Engelmann 1986.

<sup>21</sup> Lawall 2004: 179 ff.

<sup>22</sup> However, the tradition that the Kroisos-temple took 120 years to build (Pliny, *HN* 36.95) suggests that resources were either very limited or diverted elsewhere. Pace Büchner 1905: 2802 (who dates the episode to 398) and Börker 1980 (but see Wesenberg 1981), I see no means of extracting historical sense and context from Macrobius' citation (*Sat.* 5.22.4–5) of a fragment of Alexandros Aitolos which appears to record that the Ephesian people, having dedicated a temple to Artemis, offered a prize of 1000 gold *sigloi*, won by Timotheos, for the best commemorative poem of the event (Timotheos F 2 Wilamowitz = Page, *PMG* Fr 778, p. 400).

<sup>23</sup> Nik. Dam., *FGrH* 90 F 65. The story is an expansion of Hdt 1.92 (thus Jacoby *ad loc.*) and is echoed with extra detail in Ailian, *VH* 4.27.

<sup>24</sup> Nikias' dedication of land at Delos in 417, the income of which was earmarked for sacrifices and feasting, offers a near parallel (Plut. *Nik.* 3.7).

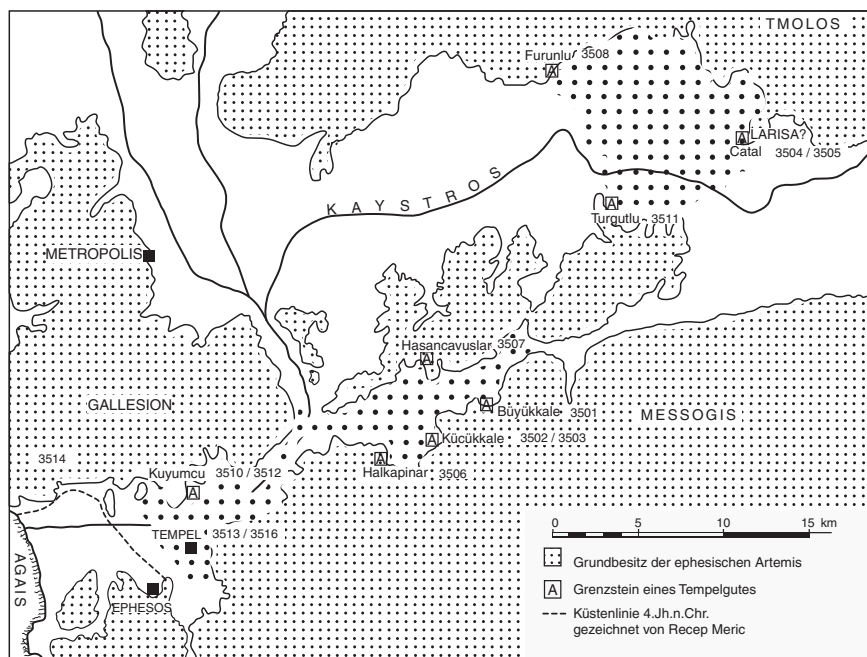


Fig. 9.1. Map of find-spots of *horoi* and indication of the areas of Artemis' estates. (from *I.Eph.* VII, 2, p. 296).

Secondly, *other revenues*. Alexander's order, that the city should pay to Artemis the tribute which they had been paying to the barbarians, receives a bare two lines in Arrian (*An.* 1.17.10).<sup>25</sup> No direct evidence provides a figure, but the assumption that it was comparable to that paid to the Athenian *archē* (above) might not be unreasonable. If so, and unless subsequent rulers in need of revenue reversed the decision, a substantial annual sum will have remained within local circulation, thereby benefiting both the shrine and the micro-regional economy.

Thirdly, *dedications*. Again, figures are lacking, nor are we told whether Herostratos' fire of 356 had destroyed dedications as well as the temple.<sup>26</sup> All the same, the shrine was clearly rich enough in 301 to arouse a general expectation that after Ipsos Demetrios would pillage it: that he did not, fearing that his soldiers would not obey (Plut. *Demetr.* 30.2), suggests that the haul would have been substantial. In turn the processes of creating dedications will have fuelled, as fourth and fifth contributions, both a *concentration of*

<sup>25</sup> Comparable historical and un-historical diversions of royal revenue by Alexander are reviewed by Corsten 1994.

<sup>26</sup> If Kroisos' golden cows (Hdt. 1.92.1) were still extant by then (Herodotos is vague) and survived, the modern suspicion that the fire was a put-up job would be confirmed (cf. Knibbe and Langmann 1993: 14 n.29; Karwiese 1995: 57–9; Knibbe 1998: 89 n. 171).



*craftsman skills* and a continual and profitable *hospitality trade* in catering for pilgrims, dedicants, and visitors to various festivals (and presumably also to their accompanying fairs).<sup>27</sup>

Sixth, themselves generating part of the hospitality trade, were *deposits*. In the absence of any Athenian-style lists of dedications, the most direct and reliable evidence<sup>28</sup> is Xenophon's narrative (*An.* 5.3.4–13) of what he did with the proceeds of the sale of prisoners, a tithe of which was to go to Apollo and Artemis. *En passant* through Ephesos, he deposited Artemis' share with the 'Megabyzos', the warden of Artemis. In the event, having met 'Megabyzos' as *theōros* at Olympia, he recovered his money and used it to create his estate at Skillous, with its explicit echoes of the Artemision. Likewise, the act of recovering a deposit left with Artemis for safe-keeping is the basic transaction in Menandros' *Dis exapatōn* as adapted in Plautus' *Bacchides*. Both the historic act of Xenophon, and the fictional one of Sostratos' father in Menandros, can reasonably be taken as illustrating normal elite behaviour. Lastly, *the Artemision as a bank*, lending money out at interest. The bulk of the evidence for such a practice is post-Hellenistic,<sup>29</sup> but the great debt law of 86/5, together with Gabrielsen's recent exegesis of the practice, is compelling evidence that the temple did indeed lend out its moneys for speculative purposes, which in the emergency it had to write off.<sup>30</sup>

Such activities were normal aspects of the social role of any major temple, but they were clearly carried on by the Artemision on a large scale, so that the need to protect them helped to shape Ephesians' attitudes towards the wider world. Their economic effect extended well beyond the obvious specific spin-offs of profit from temple money-lending or of a flow of income to citizens and residents from employment and inn-keeping. In a word, the temple was a huge economic engine, generating resources and income year in, year out. Provided that it could be adequately protected against plunder or sequestration, it was big enough in relation to its local economy for its activities to give that economy a stability which it might otherwise lack: they have to be seen as positive and functional. Just as the temple's portfolio of productive properties was broad and variegated enough to ensure that adverse circumstances would not affect all its components with equal force, so too, as the ever more elaborate

<sup>27</sup> Not at all well attested, it seems, until the Roman period, though those known earlier include Thesmophoria (Hdt. 6.16.2) and Dionysia (*I.Eph.* IV 1390). This is not the place to pursue the complications generated by Thucydides' reference to the Ephesia (3.104.3, with Hornblower *ad loc.* and Dillon 1997: 130–1). Cultic journeys away from Ephesos are reflected in *I.Eph.* Ia 3, which lists the men of Sardeis condemned for mishandling the sacred envoys sent from Ephesos to Artemis' daughter shrine at Sardeis in the later fourth century BC (Dillon 1997: 56).

<sup>28</sup> References in Benndorf 1906: 261–2, with Burkert 1999: 65.

<sup>29</sup> References in Bogaert 249.

<sup>30</sup> *I.Eph.* Ia 8 = SIG 742, lines 36–41; Gabrielsen 2005: 139 and 140 with 158 nn.12 and 14, and 146 with 160 n. 54, citing the same text as evidence of *systemata* associations in Ephesos lending money via *ekdaneistai*.

reconstructions of the temple reflect, the flow of pilgrims could be expected to be stable enough to engender confidence in long-term investment in facilities.

## POLIS, CHÔRA, AND PRODUCTION

I now turn to the more secular components of the local economy, starting with the city's immediate geographical situation. The urban area itself has been transformed out of all recognition since 1000 BC by the silting-up of the lower Kaystros valley.<sup>31</sup> Such topographical sense as the city's foundation story yields when transmitted through Strabo, Athenaios, and Pausanias<sup>32</sup> indicates that one must reinstate as sea in the EIA the entire alluvial plain depicted on Fig. 9.2: I ignore the debate about the locations of Syrie and Koressos.<sup>33</sup> The

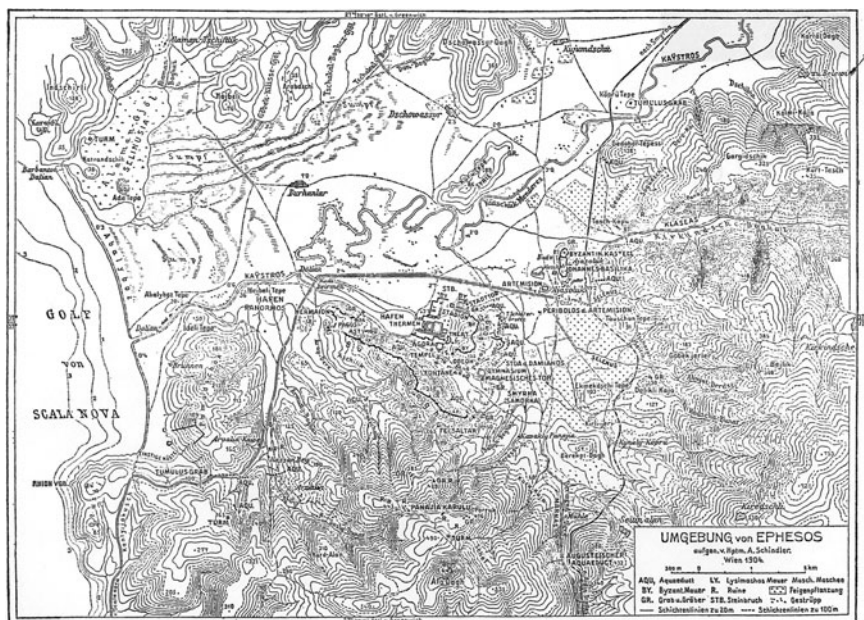


Fig. 9.2. Lower Kaystros valley and alluvial plain. (From *RE Suppl.*-Bd. XII, Sp. 1663–6).

<sup>31</sup> Detailed geological analysis in Kraft et al. 1999, 2000, and 2007, with previous literature: summary in Scherrer 2001: 58–62.

<sup>32</sup> Knibbe 1998: 74–5 for translations and 76–82 for identifications.

<sup>33</sup> Scherrer 1999; Rubinstein 2004: 1071ab; Scherrer 2006; Mohr 2007; Scherrer 2007. Likewise, I omit all discussion of the topography of the Lysimachean city and its inner and outer fortifications (Alzinger 1970: 1591 ff.; Brein 1976–77; Jobst 1978). An *FiE* volume, *Stadtmauer von Ephesos*, is envisaged (cf. Jobst 1978: 447 n. 1 and 455 n. 12), with Seiterle 1973 meanwhile.



Fig. 9.3. The Hellenistic-Roman city. (From *I.Eph.* VII, 1 sub fin.)

late Archaic settlement was replaced, presumably in the 550s at the insistence of King Kroisos of Lydia, by a settlement on the hill Ayasoluk, the later site both of the basilica of S. John and of the Byzantine castle, and that in turn was succeeded, at the insistence of King Lysimachos in the 280s, by the vastly larger settlement back on Panayirdağ with its fortifications to the south on the ridge of Bülbüdağ (Fig. 9.3).

*Polis* and sanctuary are best placed within their *chōra* by looking southwards and north-eastwards.<sup>34</sup> To the south (Fig. 9.4), Ephesian outreach towards the Panionion was seemingly a very gradual process. Pygela (or Phygela: orthography varies) and Marathesion were separately assessed by the Athenian Empire, and even Phygela maintained some independence subsequently, to judge from two surviving fourth-century decrees,<sup>35</sup> being incorporated into Ephesos only by Lysimachos.<sup>36</sup> Marathesion had been Samian, according to Strabo, whereas Anaia had been Ephesian, but at an

<sup>34</sup> Full review of the evidence for Ephesian possession of land in Büchner 1905: 2799–802. Further reports from the survey currently in progress (Groh and İçten 2005) are awaited.

<sup>35</sup> *I.Eph.* VII,1 3110 = *I.Milet* 142 = *Staatsverträge* III 453, a fourth-century Milesian decree of *isopoliteia*; 3111, a citizenship decree of Phygela, dated c.310 by Keil, passed with 350 votes, and citing a tribe Agamemnonis and a *genos* Eurides which are not Ephesian institutions, and a sanctuary of Artemis which is presumably that of Artemis Mounuchia mentioned by Strabo 14.1.20, not the Ephesian Artemision. Consistently, the town is listed c.330–324 with a *theorodokos* for the Nemea (*SEG* XXIII 189, II 9, with Perlman 2000: 205 f.) Further references in Rubinstein 2004: 1094 no.863. For Phygela cf. also Ragone 1996 and Robert *ap.* Billows 2007: 36 n. 11.

<sup>36</sup> Thus *I.Eph.* VII 1, p.104. The direct evidence is *I.Eph.* IV 1408, a decree about the garrison installed 'by the king' in Phygela moved by a Philainetos, who is identified with the Philainetos son of Philophron who moved a decree honouring an envoy sent by the kings Demetrios and Seleukos in 300 (*I.Eph.* V 1453). The king referred to in 1408 should therefore be Lysimachos.

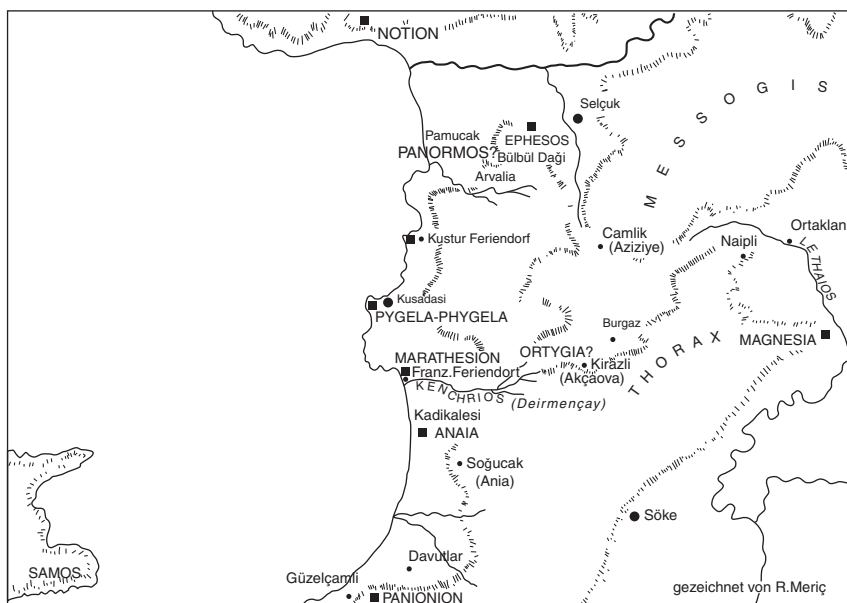


Fig. 9.4. The coastline southwards from Ephesos. (From *I.Eph.* VII 1, p. 100).

unspecified date the two cities swapped the one for the other.<sup>37</sup> By the late Hellenistic period ambitions extended further still, for Herakleion on the northern slope of Mykale had been in revolt but was adjudicated back to Ephesos by the Romans after Artemidoros' embassy.<sup>38</sup> Where that left possession of the Panionion is unclear.

That southern area, though fertile and productive, was constricted by the ridge of Thorax which formed the frontier with Priene and Magnesia. If instead we now look north-eastwards (Fig. 9.5), Ephesian expansion up the Kaystros valley, known in general terms to Strabo (13.3.2, 620C) but otherwise undatable, eventually placed the whole valley in the city's hands, though a decree of Klaros dated after 120/119 implies that Metropolis was then independent, an inference confirmed by some documentation from Metropolis.<sup>39</sup> However, a mid-second-century statue-base for an Attalid administrator reports him as 'strategos over Ephesos and the places by Ephesos and the

<sup>37</sup> Strabo 14.1.20, with Wilamowitz *ap. I.Eph.* VII 1, p.99. The exchange predates *IG* XII 6, 172 (Austin<sup>2</sup> no.135).

<sup>38</sup> 'Herakleiotis' in Strabo's text (14.1.26), which must be the Herakleion in the southern paralia, cited in *I.Priene* 48. To the best of my knowledge its site has not yet been identified.

<sup>39</sup> *SEG* XXXIX 1244. I 50-II 7 and *I.Eph.* VII,1 3407-8 and 3418-19 (Metropolis).

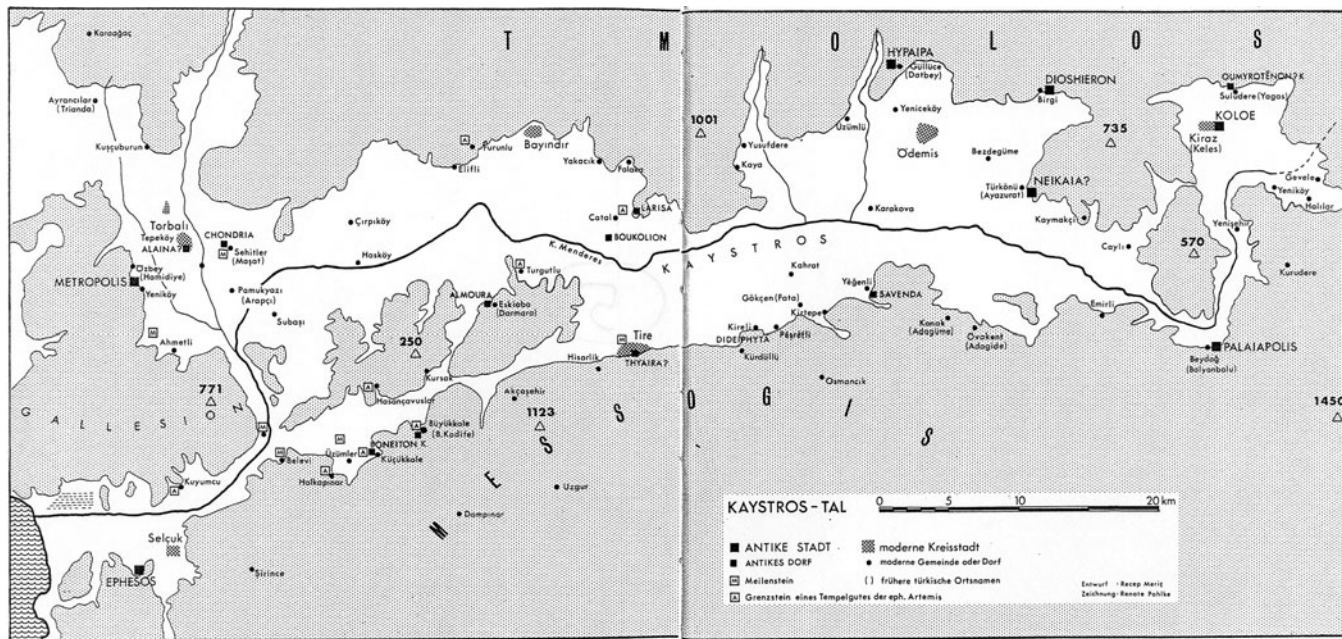


Fig. 9.5. The Kaystros valley. (From *I.Eph.* VII, 2, sub fin.)

Kaystros plain and the Kilbianon'.<sup>40</sup> That certainly implies that the scope of the assize district described by Pliny (*HN* 5.120) as extending to the head of the valley had already been delineated by the Attalids, if not earlier, but tells against any inference that the *politikē chōra* of Ephesos embraced the whole valley region.<sup>41</sup>

Also in this direction, evidence for the names of Ephesian tribes and *chiliastyes* confirms Pausanias's statements that Lysimachos forced the inhabitants of Teos, Lebedos, and Kolophon into synoikism with Ephesos.<sup>42</sup> Whether this act, as with Antigonos' intervention some 15 years earlier (*RC* 3–4), involved their total depopulation is disputed, nor is it clear whether their territories were incorporated into Ephesos', but clearly the net effect of all the imposed or agreed shifts and extensions of boundaries described here was to increase the land area and population of Ephesos, making it thereby a more heavyweight player in regional politics. One consequence for internal politics also follows, for on the assumption that the inhabitants of the incorporated territories retained their title to their land, the internal balance of property-power within the larger polity will have shifted slightly away from the shrine and towards the civilian population.

Such territorial incorporations prompt the need to assess another kind of balance, that between population and food supply. Hard evidence is absent, for the figure of 40,000 for the adult male population which has had considerable currency has been shown to be baseless.<sup>43</sup> Moreover, two kinds of qualitative information superficially point in different directions. The first is negative, in that unlike Miletos no Ephesians are reported to have migrated overseas in the Archaic period: indeed the literary tradition presents Ephesos as a quasi-colony composed of incomers. However, by the late Classical period the balance may have shifted, to judge from some of the hundred-strong sequence of decrees of the early Hellenistic decades which confer Ephesian citizenship on citizens of other Aegean states.<sup>44</sup> Of specific relevance here are those which reflect a concern for supplies of grain and thereby suggest that Ephesos like Athens was not self-sufficient. Those

<sup>40</sup> *I.Eph.* II 201 = Allen 1983: 226 no.25, with further detail about the officer named in *I.Eph.* VII,1 Addenda, p.6; Knibbe 1998: 97. Likewise, the former *polis* Larisa on the northern side of the Kaystros valley (no entry in *Inventory*, but cf. p. 1045a) was firmly Ephesian by Strabo's time (13.3.2, C620: *I.Eph.* VII 1, 3272 with Robert 1951: 42–4).

<sup>41</sup> Confirmation now comes from the dekastadion stone *I.Eph.* VII 2 3601, located 90 stadia from Ephesos and 410 from Sardeis, with the dates 159/8 or 138/7 suggested by Thonemann 2003: 95–6.

<sup>42</sup> Paus. 1.9.7 and 7.3.4–5; Engelmann 1996 for currently known attributions.

<sup>43</sup> Warden and Bagnall 1988, with Pleket 1990. It derives from a straight misreading of *I.Eph.* III 951.

<sup>44</sup> List in Habicht 2002: 27 n. 66, with valuable analysis by Walser 2008: 47–87 and 321–56.

certainly or probably relevant are: (1) *SEG XXXIX* 1151 for Demokrates of Rhodes, dated in the 320s by Chr. Habicht with the suggestion that it reflects corn imports during the famine, (2) *ibid.* 1159 for Sokrates of Margylia, explicitly in return for his services in importing grain, (3) *I.Eph.* V 1452, for Archestratos of Makedonia, general for King Demetrios Poliorketes at Klazomenai, explicitly *inter alia* for his service in rescuing the corn-ships, (4) *ibid.* 1455, for the grain-importer Agathokles of Rhodes, for selling grain below current market price, and (5) *ibid.* 1461, recording that ‘those elected from the people for the grain’ had conferred citizenship on three men, named without ethnics. (6) In addition *I.Eph.* IV 1423–1426, three decrees for men of Naukratis and one for a Samian, passed in return for their services to visiting Ephesians, could well reflect activities to do with grain supplies. (7) *I.Eph.* VII,1 3419, a lost and undated decree of Metropolis, cites the honorand *inter alia* for his grain-purchases during grain-famines. (8) Lastly, the ?decree? *I.Eph.* IV 1382 stipulates that citizens and ephebes should take an oath to protect the *politeia* and the shrine of Artemis. Though lost and undatable, its reference to τὰ σιτικά in line 6 *prima facie* reflects a major preoccupation. One may grant that, as at Athens, these decrees reflect a preoccupation generated by the grain-famine of the 320s, but its impact was clearly long-term.<sup>45</sup>

However, other decrees in this early Hellenistic series reflect a preoccupation with productive activities and resources other than agrarian and grazing land. The most explicit, and by now much-cited, case is *I.Eph.* IV 1420 of the 320s, which confers citizenship on the brothers Kittos 4 and Bacchios 5 sons of Bacchios 4 of Athens, who as potters ‘undertake to work the black clay and the hydria for the goddess, taking the (fee) stipulated in the law’. The actual circumstances and motivations remain guesswork, but the document serves as a trace-element reflecting, as recent scholarship has made clear,<sup>46</sup> the development of Hellenistic Ephesos as a major centre of ceramic production, in part at least stemming from the transfer of technology and craftsmen from Attika. Thus, for example, while the mould-made bowl as a ceramic genre has been identified as an Athenian innovation of the 220s (Rotroff 1982: 6–13), it was Ephesos which from the mid-second century BC onwards became one of the three major production centres (Guldager Bilde 1993; Rogl 2001). Yet,

<sup>45</sup> In general Walser 2008: 302–9. For later grain-trade links with Egypt, cf. Wörrle 1971 and Oster 1990: 1679 n. 42. For Agathokles of Rhodes cf. also Gabrielsen 1997: 78–9, Bresson 95–9, and Austin<sup>2</sup> no.130.

<sup>46</sup> Salient references include Mitsopoulos-Leon 1978; Seiterle 1981; Mitsopoulos-Leon 1985; Guldager Bilde 1993; Outschar 1996; various papers in Krinzing 2001; Ladstätter 2002 (kiln in Hanghaus 2 area); Meriç 2002 (detailed catalogue of late HL ceramics from an Agora well); Lawall 2004; Lawall 2005: 205–7; Thomas 2005; Lawall 2006; Lawall 2007. I have been unable to consult Rogl 2003.

since their circulation depended on that of wine-amphoras,<sup>47</sup> they too were trace-elements, reflecting the evidence for wine production which is discussed below.

Other immigrants from Athens<sup>48</sup> and elsewhere<sup>49</sup> might also have been craftsmen, for the precious metal resources of Lydia had clearly long stimulated gold- and silversmith skills, to judge from the sixth-century deposits in the Artemision<sup>50</sup> which also exemplify the close association between metal workshops and sanctuaries in the Archaic period.<sup>51</sup> That such skills are less directly in evidence thereafter is not evidence of absence, for 'the bronzesmiths and the carpenters and the smiths and the leather-workers and the painters' led Xenophon's vivid vignette of Ephesos as Agesilaos' 'workshop of war' in spring 395 (*Hell.* 3.4.17), and the city's continuing role as a naval base throughout the Hellenistic period (see below) will have sustained demand for such craft skills. Indeed the interests of a substantial and long-established body of such craftsmen must underlie the most striking illustration of their continued presence and preponderant economic and political influence, in the form of the outburst of Demetrios the silversmith against St Paul's presence and influence at Ephesos, together with the resultant riot as reported by Luke in Acts 19.<sup>52</sup>

Other kinds of production are a matter of hints and indirect reflections, as when Ephesos figures among other Greek towns as the source of certain high-quality fish.<sup>53</sup> Other known resources accessible in the area include claybeds, mines, quarries and forests,<sup>54</sup> though the city may have been a net importer of

<sup>47</sup> Thus Guldager Bilde 1993:193.

<sup>48</sup> SEG XXXIII 932, with Habicht 1987 (whence SEG XXXVII 881).

<sup>49</sup> Habicht's suggestion *ad loc.* that the Teisikrates honoured with citizenship in SEG XXXIX 1164 is the sculptor of Sikyon (references in *LGPV* IIIA s.v. Teisikrates 4) would point in the same direction, but the phraseology of the decree is more appropriate for a non-immigrant, and the name is well attested elsewhere (e.g. in Athens and Thasos).

<sup>50</sup> Treister 1996: 70, 76, 105.

<sup>51</sup> Morgan 1990: 30–47; Treister 1996: 122 with refs.; Feyel 2006 (but without specific reference to Ephesos).

<sup>52</sup> Acts 19: 23–41.

<sup>53</sup> F7 Olson-Sens (F187 in *Suppl. Hell.*) *ap.* Ath. 3.90d; F14 O-S (F144) *ap.* Ath. 7.320a; F 13 O-S (F143) *ap.* Ath. 7.328b. Other sources praise her mussels (Hikesios *ap.* Ath. 3.87c and ? Diphilos? *ap.* Ath. 3.90d). *I.Eph.* Ia 20 and V 1503 confirm the continuing importance of the fish-trade in later centuries. Connoisseurs of cabbage will also note Ephesos as a source of *halmýris* of the best quality (Eudemos *ap.* Ath. 9.369f).

<sup>54</sup> Basic references in Büchner 1905: 2802, with Oster 1990: 1685 for the marble quarries and Vitr. *De arch.* 10.2.15 for the cult of Pixodaros as their discoverer. One other major product of the Kaystros valley was hemp (*I.Eph.* II 445, line 8, and 454(b) for the *κανναβάριος*, with Robert 1963: 142–6). Though attested only from the Imperial period, its production, no doubt stimulated by the continual need of the naval base for cordage, is very likely to have had a long past. The same may well be true for emery (*σμίρις* or *σμίρις*), attested in *I.Eph.* I 23, line 18, with Robert 1980: 339–342). In contrast, by Vitruvius' time the processing of cinnabar, though a local commodity (Vitr. *De arch.* 7.8.1, with *I.Eph.* VII,2 3706), had been transferred from Ephesos to Rome (*De arch.* 7.9.4, with Cottier et al. 2008:125).



timber even in 407, as she certainly was in the Imperial period.<sup>55</sup> More explicit as an example of added value is the tradition that Ephesos used to be distinguished for its production of perfume, especially 'the very desirable perfume *megalleion*'.<sup>56</sup> In partial contrast, the highly coloured description of Ephesian luxury and decadence, which Athenaios cites from the *On the temple in Ephesos* of the otherwise unknown Demokritos of Ephesos,<sup>57</sup> seems to reflect a significant level of importation of specialized textile production, Corinth and Persia being named as sources. However, the close congruence of the colours which he cites to those known from production in Sardis<sup>58</sup> is a hint, buttressed by Plutarch's vignette of Ephesos as being under very strong Persian cultural influence in 407, that no small part of Ephesos' livelihood and profile derived from an economic and cultural symbiosis with her non- or semi-Greek hinterland, and especially with Sardis (cf. n. 27 above), as well as with the Aegean. Such hints suggest that alike as producer, transmitter, and consumer, Ephesos was already a major economic entity before her Hellenistic Aufschwung.

## EPHESIAN ATTITUDES

Such considerations prompt questions about Ephesian collective attitudes and about their economic implications. Some are straightforward, such as the dispositions (already noted) to extend their *chōra* as much as possible or to protect the maritime grain-supply. Others are more individual, such as the disposition to attract extra citizens and residents which is visible as early as 409<sup>59</sup> and reaches an apogee in the early Hellenistic period. Motives for the one hundred or so epigraphically attested grants (cf. n. 44) from the two generations after Alexander were evidently mixed, for besides those noted above (p. 188) which reflect grain-supply anxieties, others honour royal officers and apparatchiks, while others honour agonistic victors. Such honorific grants were supplemented by a willingness to accept non-citizen

<sup>55</sup> Plut. *Lys.* 3.4 and *I.Eph.* I 23, lines 13 ff., with Meiggs 1982: 358.

<sup>56</sup> Ath. 15.688f–689a, with Reger 2005: 256; no longer a specialism in Apollonios' own time as a contemporary of Strabo.

<sup>57</sup> Ath. 12.525cd, = *FGrH* 267 F 1.

<sup>58</sup> Dusinberre 2003: 22–23, with further references.

<sup>59</sup> Xen. *Hell.* 1.2.10, narrating that in summer (1.2.4 for seasonal date) 409 the Ephesians, with help from Tissaphernes, Syracusans, and Selinountioi, had repelled an attack by Thrasylos' forces. In return Ephesos honoured the men of Syracuse and Selinous and gave those who wished the right to live in Ephesos *atelēs*: and when Selinous was destroyed (in 408), they gave them citizenship too. Cf. also *IG II<sup>2</sup>* 1 = RO 2, an Athenian decree of 403/2 for the Samians but also praising Ephesians and Notians for receiving Samian exiles (lines 48–9).

residents<sup>60</sup> and to sell Ephesian citizenship to suitably qualified men<sup>61</sup> or even, in the emergency of 86/5, to open it to all free residents.<sup>62</sup> Yet, as Habicht has noted, grants of citizenship at Ephesos rarely carry the additional privilege of *ateleia*:<sup>63</sup> the advantages of attracting additional citizens were not to be diluted by failing to conserve income from import and export taxes.

One other 'attitude' is specific and long-term: the determination to secure recognition of, and to preserve, both the tax-free status (*ateleia*) of the goddess and of the Artemision and its role as a place of refuge (*asylia*). For the first, Alexander's order of 334 that the *phoroi* previously paid to the Persians should henceforth go to the temple did not in itself confer *ateleia* on the temple's own property, but some such previous recognition must lie behind a decree, perhaps of 302 itself just after Prepelaos had captured the city for Lysimachos, which thanks one of Prepelaos' officers for safeguarding the holy *stathmos* and the *ateleia* for the goddess.<sup>64</sup> If Louis Robert<sup>65</sup> was correct to refer '*stathmos*' to the billeting of troops and '*ateleia*' to the income from the temple estates, the Ephesian oligarchs then in power will have secured something substantial for the shrine.

<sup>60</sup> e.g. by the 40s–50s AD there was clearly a substantial Jewish community in Ephesos, large enough on Luke's narrative to justify St Paul being there for two years (Acts 19: 8–10). However, nothing suggests that this was the result of any royal initiative, whether the formal settlement of military colonists in the wake of Antiochos III's letter to Zeuxis (Joseph, *AJ* 12.148–53) or in some other guise (Cohen 1995: 212–13 declines to identify any specific locations). It is more likely to have formed part of the general Jewish diaspora of the late Hellenistic period. Mitchell 1993: 1.172 n. 65 cites Hebrew inscriptions from Akmonia, Smyrna, and Sardis but not from Ephesos or its *chōra*, while singling out the Jewish communities of Sardeis, Aphrodisias, Apameia assize district, and Phrygian Akmonia, but not Ephesos (ibid. 2.31–7).

<sup>61</sup> Thus (a) *I.Eph.* VI 2001 (= *SIG* 363 = *I.Priene* 494), of c.300 or soon after, is traditionally interpreted as offering citizenship to Prienians in exile at Charax, at a price of six mnai, with selection dependent upon their being 'free and from free', and in limited numbers. However, Stern 1987 argues that the crucial word *ἐξαμναίους* denotes rather the annual income which each candidate must show he possesses. (b) The decree *I.Eph.* VI 2005, regrettably undated, allows the city to make (two?) citizens in order to raise funds for training and travel for a promising young athlete, when 'there are no resources' (line 8). (c) *I.Eph.* V 1461 seems to be a decree validating the desire of 'those elected for the corn' to make three citizens 'in the interests of the people'.

<sup>62</sup> *I.Eph.* Ia 8 (= *SIG*<sup>3</sup> 742 = Asheri 1969: 71–3 no. XL and 114–17 no. III), lines 43–7: in the crisis of attack by Mithradates, all *isoteleis* and *paroikoi* and *hieroi* and freedmen and *xenoi* who take arms and enrol with the leaders are to be citizens (with provision for the formalities).

<sup>63</sup> Habicht 2002: 28, with exceptions listed ibid. n. 76. See further Gabrielsen (this volume).

<sup>64</sup> *I.Eph.* V 1449, with Diod. Sic. 20.107.4. The inference from *SEG* XXXIII 932 V that the good offices of Aristodemos of Miletos secured a confirmation of *ateleia* from Antigonos after 306 (thus edd. pr. and Billows 1990: 374) is questionable (*BE* 1983: 142–3 no. 335): for procedure see Rhodes and Lewis 1997: 364 with n. 1. I know of only one later reference to *ateleia* for the sanctuary (*I.Eph.* II 212.4, in a letter of Caracalla). The gulf of time between the two attestations enjoins caution, but a confirmation of tax-free status by Augustus would be consistent with his other measures for the Artemision (for which see now Rogers 2007). *Ateleia* conferred upon individuals as part of the conferral of citizenship is of course a different matter, as is that conferred or confirmed in a Triumviral edict upon teachers, sophists, and physicians (*I.Eph.* VII,2 4101).

<sup>65</sup> Robert 1946: 83–5, cited in part at *I.Eph.* V 1449, commentary on line 4.

*Asyilia*, however, is a more complex matter, its consequences for human movement and for the needs of suppliants carrying indirect economic implications. Exposition of the evidence<sup>66</sup> is needless after Rigsby's detailed discussion. It is sufficient to note that the *asyilia*-status of the temple was generally recognized, though it failed to protect some refugees and though the authority for it was mythologically based custom and practice rather than any formal grant *ab initio* in historic time. The main issue, helpfully summarized by Strabo 14.1.23, C.641, was that of the extent of the area to which inviolability was to be accorded. Since the actions he reports of Alexander, Mithradates VI, and M. Antonius in enlarging it look like the extension of a privilege, while that of Augustus in constricting it is presented as one of repressing lawlessness, the balance of Ephesian collective interest must have inclined towards its maximization, for all the problems of public order which triggered a Senatorial investigation in AD 22 (Tac. *Ann.* 3.60.1–3). Confirmation comes from the terms of the Senate decision to stabilize such *asyilia* privileges as they recognized, 'neu specie religionis in ambitionem delaberentur' (ibid. 63.7): the competitive advantages which cities such as Ephesos sought will not simply have been those of prestige.

Yet there are wider implications, for any exploration of Ephesian collective attitudes yields a strong sense that they consistently 'kept their distance'. Over a century ago, in his basic article on Ephesos, Büchchner (1905: 2789) noted Ephesian *Lauheit*, 'lukewarmness', during the Ionian Revolt, a characteristic which helped to keep the Artemision the only temple in Greek Asia Minor spared by Xerxes' army (Strabo 14.1.5, C634). True, they did become members of the Delian League (but may have had little choice in the matter, took no prominent part, and left it when they could), balanced statues of Lysandros and other Spartiates in the Artemision with statues of Konon and later of Timotheos,<sup>67</sup> joined the *symmachikon* in the late 390s, and survived Persian overlordship, attacks from Maussolos and a succession of tyrants after 387. Yet, just as statues of Spartans and Athenians had reflected earlier fluctuations of power, so too by 336 they had placed an image of Philip in the Artemision, only to have it wrecked during an oligarchic coup mounted when Memnon looked likely to prevail.<sup>68</sup> Predictably, they received Alexander with good grace in 334. Arrian has him marching over Tmolos from Sardis and down the Kaystros valley to enter an Ephesos from which the Persians' mercenary garrison had had time to escape in two Ephesian triremes. Beside the tax favour accorded to the Artemision, we are told that he restored pro-Macedonian exiles,

<sup>66</sup> Assembled in Benndorf 1906: 258–60, with summaries in Picard 1922: 139 and 148–51 and in Rigsby 1996: 386 (but it was the Ephesians, not Kroisos, whom Herodotos 1.26 reports as attaching the city to the Artemision by a rope: Van Berchem 1960: 24–6) and Burkert 1999: 67 f.

<sup>67</sup> Paus. 6.3.15–16, with Habicht 1970: 7.

<sup>68</sup> Arrian, *Anab.* 1.17.11—not *prima facie* evidence for a cult, since his word is *eikōn* ('statue'), not *agalma* ('cult-image'): Habicht 1970: 14–16, 143, and 245 for discussion and references.

replaced an oligarchic regime with a democracy, halted a pogrom unleashed upon the supporters of Memnon and the Persians, and led his army in procession to sacrifice to Artemis.<sup>69</sup>

Thus Alexander as liberator and benefactor: but those liberated kept their *Lauheit*. Strabo reports Artemidoros' account that, in order to rebuild the Artemis temple after Herostratos' arson attack, the Ephesians had been raising funds from the ornaments of their women-folk, from their own properties (presumably via an *eisphora* of some kind), and from disposing of the columns of the earlier temple. (The Aristotelian *Oikonomika* more helpfully states that they fixed a price for each column, in return for which donors could have their names inscribed on it as dedicators.<sup>70</sup>) Artemidoros continues that Alexander 'promised the Ephesians to pay the past and future expenses (of the rebuilding of the Artemision) on condition that the inscription would carry his name, but they were unwilling: . . . and he [sc. Artemidoros] praises the Ephesian who said to the king that it was not fitting for a god to dedicate offerings to gods.'<sup>71</sup> The actual *mot* is anachronistic, for Alexander's trip to Siwah lay two years in the future, but is still *ben* enough *trovato*, not just because a comparable offer was evidently accepted at Priene<sup>72</sup> or because a cult of Alexander at Ephesos is attested centuries later,<sup>73</sup> but because its message—one which balanced unctuous verbal flattery with keeping their political distance—is of a piece with the skill with which the Ephesians had recently been reading the fluid politics of the Aegean.

Ionians called such balancing-acts 'whitewashing both sides of the wall'.<sup>74</sup> Right through the Hellenistic period, though at the cost of much disruptive political oscillation between tyranny, oligarchy, and democracy until the 280s, the Ephesians wielded an admirably skilful brush, carefully honouring partisans and apparatchiks of each Successor regime at appropriate moments and accepting *bon gré mal gré* the impact and presence successively of Lysimachos, Ptolemaios Physkon, Antiochos II Theos, Antiochos III, the Attalid kings, and various Roman generals, not to mention Hannibal in winter 196/5. Consistently, though

<sup>69</sup> Arrian, *Anab.* 1.17.9–12, with Bosworth *ad loc.*

<sup>70</sup> [Arist.] *Oec.* 2.2.19, 1349a (for a similar expedient at Lindos, cf. *Lindos* II 419, with Dio Chrys. *Or.* 31.9–10). It is unfortunate that only two of the surviving dedications identify donors, one a woman of Sardeis (*I.Eph.* V 1 519 (a)) and the other an [A]ristoa[nax] (*ibid.* (b) 1), who is unknown (but the name is attested on Cyprus, *LGN I* s.n.). Pliny's report (*HN* 36.95) that the columns were 'a singulis regibus factae' (in contrast to those of the 'Kroisos-temple', a few of which survive as *I.Eph.* V 1518) hints at a lost but potentially invaluable archive of piously competitive ostentation. Cf. also Picard 1922: 30 ff.

<sup>71</sup> Strabo 14.1.22, C 641 (not yet republished in *FGrH*: the entry at *FGrH* 438 is token). Strabo quotes Artemidoros for 'decrees passed at the time' as evidence of what he asserts: the problem how they survived to reach him as a contemporary of Cicero cannot be explored here.

<sup>72</sup> RO 86: not necessarily in 334, of course.

<sup>73</sup> *I.Eph.* III 719 (Trajanic period), with Habicht 1970: 18–19.

<sup>74</sup> Paus. 6.3.15, applying the phrase primarily to the Samians.

forming a *dioikēsis* of the enlarged Attalid Kingdom they kept their distance from the pretender Aristonikos after 133 (for all that he was purportedly son of an Ephesian *hetaira*), and even managed to balance themselves between Antonius and young Caesar in the 30s.

## THE DRIVERS OF CHANGE

However, such considerations largely concerned the preservation of the stable state. If we are to account for Ephesos' rise to the pre-eminent position she enjoyed under the Roman Empire, other considerations present themselves. They primarily reflect the ways in which the needs of communication and exchange within the Iron Age Aegean, themselves generating one loosely linked system of circulation, interacted with the need for that system to communicate with the Anatolian plateau.<sup>75</sup> The Aegean 'system' was primarily driven by private and public purchasing-power, which was diffused very variously throughout the region and was influenced by (but not identical with) varying patterns and epicentres of sea-power. That system seems to have needed one first-order entrepot of exchange (coexisting and interacting, of course, with competitors), a need probably met by Miletos till 494 and certainly met throughout the fifth and fourth centuries BC by Peiraeus. Thereafter the prime role probably passed to Rhodes, and then to Delos for a century after 166 BC: as has been noted, that Delos lost much of its importance in the first century BC was due less to the assaults of Mithradates in 88 or of Athenodoros' pirates in 69 than to a shift in patterns of exchange.<sup>76</sup>

Alike for shippers, merchants, and polities, the fall of Miletos will have posed anew the problem of identifying the most convenient route of access to and from Anatolia. Granted, the two centuries of Achaimenid control may have inhibited major flows, though Greek cultural influence is as visible at Achaimenid Sardeis as Achaimenid cultural influence is visible in fifth-century Athens.<sup>77</sup> In any case, whether from a maritime or a landward viewpoint, there was no one leading candidate, for one or more usable locations were offered by each of the three major west-flowing rivers whose valleys descend from the plateau. Users of the northernmost, the Hermos, had had Smyrna readily accessible until its destruction ca. 545<sup>78</sup> left the vicinity inhabited by

<sup>75</sup> The need to communicate with e.g. Thessaly, Macedon, Sterea Hellas, or the Thracian hinterland will have set up parallel interactions.

<sup>76</sup> Thus Bruneau 1976: 262a. Habicht 1997: 341–2 implicitly supports such an interpretation, noting that the last time 'the Romans in Delos' appear in an inscription is in 54/3 [*I.Delos* 1662].

<sup>77</sup> Dusinberre 2003 *passim*, with 90–1 for statuary; Mierse 1983. For Athens, cf. Miller 1997: chs. 6–10.

<sup>78</sup> Rubinstein 2004: 1099 no.867, citing Meriç and Nollé 1988: 130–2.

sub-polis settlements.<sup>79</sup> Its role and lands were presumably taken over by Kyme to the north, for Kyme's fifth-century tribute payments (see above) are otherwise inexplicably high. The refoundation of Smyrna on the south side of the bay is variously attributed to Alexander, Antigonos, and Lysimachos,<sup>80</sup> but though Strabo speaks moderately well of it (14.1.37, C646) no evidence suggests that during the Hellenistic period or later it regained a leading position among the seaboard cities, let alone a role comparable to that played by modern İzmir.

The next major river-valley to the south, that of the Kaystros, returns us to Ephesos, or rather to the cluster of settlements in its immediate vicinity whose identification and interrelationships have been the subject of much debate ever since excavations began (see above). What matters here is Lysimachos' refoundation on a site which allowed the construction of harbours that were more accessible from seawards, together with the willingness of successive kings, dynasts, governors, and grandees to invest significant effort and capital in keeping navigation channels open in the face of rapid silting.<sup>81</sup> That willingness will have been driven by Ephesos' role as a naval base (see below), and contrasts strikingly with the experience of the various cities and polities near the mouth of the third and most southerly river, the Maiandros, where the silting process had even more drastic effects. Well before the Augustan period Priene and Myous had ceased to be accessible by sea,<sup>82</sup> while, though habitation and construction continued at Hellenistic Miletos itself, its harbour too became less and less accessible: indeed, to judge from the lack of attestation of its ephebic institutions after c.100 BC Miletos itself may well have suffered a haemorrhage of population, imprimis to Athens.<sup>83</sup> Such evidence points, not surprisingly, to Lysimachos' refoundation as a first motor of change, and to the silting-up of Miletos as a second. As a result, Ephesos after Alexander, and even more after Lysimachos, came to enjoy a more favourable competitive situation in the long-running silent battle for the role of prime west Anatolian port. Indeed, in one sense the silting-up process gave Ephesos herself a third advantage, for the advance of the shore-line, now accurately mapped by recent work (Fig. 9.6), gradually gave the town more space for urban construction and made landward communication easier.<sup>84</sup>

<sup>79</sup> 'By villages' (κομητόν, Strabo 14.1.37), though the archaeological picture is less negative (Bean 1979: 27–8; Rubinstein 2004: 1099).

<sup>80</sup> Details in Cohen 1995: 180–3 and Billows 2007: 34–5.

<sup>81</sup> Detailed list in Kraft et al. 2000: 198–200, with Demand 1990: 171–3 for literary references from Vitruvius onwards to the problem.

<sup>82</sup> Vit. *De arch.* 4.1.4; Strabo 14.1.10; Paus. 7.2.10–11, with references *ap. Moggi and Osanna ad loc.* for evidence that Myous had been incorporated into Miletos by the early second century BC.

<sup>83</sup> In general Bean 1979: 181–91; Rubinstein 2004: 1082–8 no. 854. Specifically on depopulation, Vestergaard 2000 (but with comment in SEG L 24); on silting, Greaves 2000.

<sup>84</sup> Cf. the motif of 'lack of space' in the founding myth of the city which Kreophylos gives in his *Annals of Ephesians* (FHG IV 371 *ap. Ath.* 8.361de).

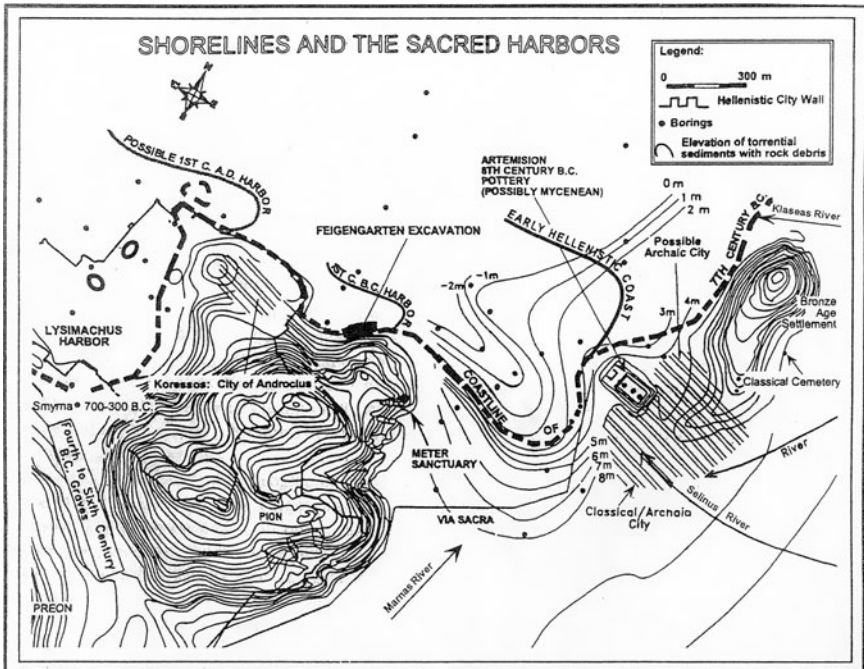


Fig. 9.6. Receding shorelines in the urban area of Ephesus. (From Kraft et al. 1999, p.96 fig. 3).

Consideration of communications by land confirms that impression, for the city was the hub of four radial land-routes. (1) The first, noted by Strabo from Artemidoros, is the north-south land route to and from Smyrna. Though conventional wisdom asserts that people and goods moved by water whenever possible, here, at 320 stades' distance (14.2.29, C663) and therefore hardly more than a two-day journey on the conventional reckoning of 150 stades a day (Hdt. 5.53), its use both avoided a long and vulnerable detour by sea round the Erythrai peninsula and afforded easy direct access by land along the coast from Smyrna to Pergamon. (2) The second route is the old Royal Road from Sousa to Sardeis.<sup>85</sup> Of course, Ephesos was not its only possible Aegean terminus, perhaps not even its most convenient one, for the Tmolos range had to be crossed somewhere, but the contest between Ephesos and Kyme triggered by the destruction of Smyrna was plainly unequal. Tellingly, when Herodotos is assessing the truth of Aristagoras' unwise revelation to Kleomenes that it was a three-month journey from the sea to Sousa, he assumes without argument that its prolongation lay up the Paktolos valley south of

<sup>85</sup> Not unique but one of many royal roads, as Briant 1996: 370 rightly emphasises: Syme 1995b: 3–23.

Sardeis over Tmolos and down the Kaystros valley to Ephesos, which he reckons to be a 3-day journey of 540 stades (5.54.2): consistently, Ktesias' calculations started from Ephesos too.<sup>86</sup>

(3) All the same, that Royal Road was not the only route of communication with the Anatolian plateau and beyond, for Strabo reports another 'public road (*koinē hodos*) being used by all who travel from Ephesos to the east'. This road led south-eastwards over the col between Ephesos and Magnesia and then went, according to Artemidoros, up the Maiandros valley through Laodikeia-on-Lykos and Apameia/Kelainai<sup>87</sup> all the way to Mazaka in Kappadokia and to the Euphrates at Tomisa.<sup>88</sup> Though the exact route of the Royal Road is still subject to much debate, it appears fairly certain that it and Strabo's *koinē hodos* were distinct routes at least as far as eastern Anatolia. (4) The fourth road is that which Strabo, still reporting Artemidoros, has starting at Physkos (now the resort of Marmaris) in Rhodian mainland territory and passing through Lagina, Alabanda, and Tralleis before reaching Ephesos after what would be a 10-day journey at 150 stades a day.<sup>89</sup> Again, the logic of such a road is patent, linking the Anatolian coastal cities to Rhodes via a short sea crossing and cutting off a very indirect sea-route which has to circumvent all the peninsulas.

It remains to consider whether the use of such routes of communication increased sufficiently in the post-Alexander epoch to prompt a step-change in the importance of entrepôts of exchange and of change-of-mode locations on the western Anatolian coast. The tentative answer must be Yes, for two reasons. The first is Ephesos' continual use as a naval base from the late fifth century right through until the civil wars of the 40s and 30s BC, a role which the silting process was not allowed to impede. Livy's account of Roman fleet movements against Antiochos' forces, with its repeated references to the city, shows that the harbour was fully accessible in 191 and 190, accommodating at least 100 small ships (36.43.8) and safe against assault though not against blockade.<sup>90</sup> True, a mole constructed on the orders of Attalos II Philadelphos in the 150s or 140s in order to scour a deeper channel for larger merchant

<sup>86</sup> Ktesias, *FGH* 688 F 33 [cited as sect. 64 by Briant 1996: 370 top]. Cf. also the dekastadion stone cited in n. 41 above.

<sup>87</sup> Cf. Bosworth (ad Arrian, *Anab.* 1.29.1) for its importance as Eumenes' winter HQ in 321 (Plut. *Eum.* 8) and as Antigonos' capital (Diod. Sic. 18.52.1; 19.69.2; 19.93.4; Plut. *Demetr.* 6.3); Syme 1995c: 335–9.

<sup>88</sup> Strabo 14.2.29, C663–4. Its course is traced in the maps in Cohen 1995 (maps 7–10). Note Syme's perception (1995b: 18) that throughout the Achaemenid period we hear much more of the use of the southern road than of the northern, while access to Miletos from the landward direction was never easy and became even less attractive once Miletos itself began to silt up. Cf. also brief remarks by S. Mitchell *ap.* Cottier et al. 2008: 176.

<sup>89</sup> 1,180 stades to the Maiandros river, the Karia/Ionia boundary, thence 80 + 140 + 120 = 340 stades to Ephesos (Strabo 14.2.29), total 1,520 stades.

<sup>90</sup> References in Zabehlicky 1995 and Knibbe 1998: 96.



ships had the opposite effect from that which was intended (Strabo 14.1.24, 641C), but Ephesos was clearly a fully functioning naval base even a century later, and a major port for much longer.<sup>91</sup> The economic implications, whether for the labour force (i.e. a steady need for a cadre of skilled craftsmen) or for the logistics of procuring *matériel* have largely to be inferred in the absence of evidence, but a further implication in the form of the necessity for successive rulers to locate a royal mint there is clear in the numismatic record.<sup>92</sup>

The second reason will have been the impact generated by royal urban foundations or re-foundations in the Anatolian interior from Alexander onwards. While their often dynastic names reveal the scale of royal initiative, it is the locations of these foundations, together with estimates of the nature of their populations and demands, which allow a tentative impression of their impact to be created. In terms of known locations (cf. Cohen 1995, maps 6–7), two impressions stand out at once. First, by far the majority of the non-maritime foundations are in western Anatolia, virtually all of those further east in Phrygia and Lykaonia being on or near Strabo's 'common road'. Secondly, even within western Anatolia there were comparatively few foundations in the Troad, Mysia, and the Kaikos valley (only Pergamon itself and Stratonikeia), while the greatest density of new settlements lay within, or were best accessible from, the three main river valleys discussed above.

Such settlements must have had some economic impact. Quantitatively, indeed, the fragmentary source material assembled in Cohen 1995 does not allow any realistic estimate of the numbers of men (Macedonians, Greeks, and others) who were thus resettled, though they must have comprised some tens of thousands if activities in the two centuries from Alexander until the demise of the Attalid regime in 133 are taken together. A qualitative evaluation is more productive, for at least three changes will have ensued. First, one would expect an increased demand for certain specifically Greek cultural products such as wine, olive oil, maybe fine textiles and leatherwork. Secondly, there will certainly have been a greater disposition for the settlers to develop and maintain links with Greek cultural symbols such as temples and festivals, with obvious consequences for infrastructure facilities and for the movement of goods and persons. Thirdly, there will have been some increased pressure for the provision of a labour force, whether in the form of the slave trade documented for Phrygia (Descat, this volume) or otherwise.

<sup>91</sup> By the good offices of Barea Soranus as proconsul, the harbour was dredged again in AD 61/2 (Tac. *Ann.* 16.23.1).

<sup>92</sup> Newell 1941/1977; De Callatay 1997: nos. 128–9 (Demetrios); Aperghis 2005: 39; Houghton and Lorber 2002.

## STRIKING A BALANCE

As always with any social vector analysis, it is only when several vectors exercise pressure in roughly compatible directions that serious change can occur. In seeking to account for the rise of Ephesos to primacy among the seaboard cities of western Asia Minor in the Hellenistic period, this case study has identified a combination of stable components and changing circumstances. The two principal developments—the growing maritime inaccessibility of Miletos and the planting of Graeco-Macedonian settlements in the hinterland—were plainly significant. However, they had the impact they did because they were compatible with the stable components of Ephesos' environment. These were three: a haven which could be turned into a port, reasonable access to the Anatolian hinterland, and a major shrine. By themselves, however, these three components provided no guarantee: the survival of the Ephesians' community, let alone its prosperity, depended time and again on their being able to read politico-military situations correctly and to play their cards wisely. The main challenge was to balance the appeal (or the threat) of a hinterland power against that of a seaward power, using as bait the prestige and enhanced legitimacy which a monarch in particular could gain from ostentatious piety and benevolence towards the Artemision.

Almost throughout, the Ephesians got it right. It worked with Kroisos, for whom the *quid pro quo* was an enforced synoikism on Ayasoluk at a date when that was still accessible by sea, which gave him a unified port-town and sanctuary. It worked with the Persians, if Diodoros' story (9.32) of the proverbial volte-face of the Ephesian Eurybatos, despatched by Kroisos to Greece to recruit mercenaries but deserting to Kyros, has any historical core. It worked again in the early fifth century BC, even though the Ionian sortie which burned Sardeis had started from Ephesos as port and muster centre for the revolt, and it worked almost continually thereafter. It worked with Lysimachos, whose enforced relocation of the city was accepted after only a token protest and whose use of it as his 'Asiatic capital' prompted a short-lived cult of him (together with a tactful statue of Arsinoe) in response.<sup>93</sup> It worked with the Seleukids, with the Ptolemies, with the Romans during the war with Antiochos III, and notably with the Attalids, for whom Ephesos was a valued possession which merited serious infrastructure investment in the port.<sup>94</sup> Only twice did her citizens get it seriously wrong: once c.300 when continued support for Demetrios after Ipsos and for a pro-Demetrios group of Prienian

<sup>93</sup> References in Cohen 1995: 177–80 and Knibbe 1998: 92–5, with Polyain. 8.57 for the statue. The quoted words are from Burstein 1986: 20 n.9.

<sup>94</sup> Strabo 14.1.24, C641; that it was ultimately counter-productive should not count against Attalos II. In general Allen 1983:120, 133–5, and 225 no.24 (= *I.Eph.* II 202).

exiles<sup>95</sup> rendered them vulnerable to, and eventually victims of, an attack by Lykos the general of Lysimachos,<sup>96</sup> and a second time when they joined Mithradates and took full part in the Asian Vespers of 88; an abrupt U-turn after Sulla's defeat of Archelaos at Chaironeia in 86 (App. *Mith.* 160–174) did not save them from ferocious Roman revenge.

One returns, perhaps, to Büchner's 'Lauheit', but Ephesian behaviour evades one-word characterization. True, an attitude of non-involvement and flexibility is clearly detectable, standing in stark contrast to the frustrated *polypragmosynē* which characterized Athens till the Chremonidean War. It is as if Ephesians consistently saw themselves not as wielders of politico-military power<sup>97</sup> but rather as trustees: doubly so, indeed, for one trusteeship role, as neutral providers and managers of port and military base facilities, was compatible with their primary and sanctified role as trustees of the goddess's shrine, possessions, and profile. Yet, plainly that is only part of the tale: a fuller characterization must return to the word 'balance' in all its various applications. No reader of the great debt law of c.300,<sup>98</sup> for instance, can fail to admire the skill and detail with which its drafters struck a balance between debtors and creditors, between 'farmers' and 'usurers', or to note how their successors did the same two centuries later in 86/5, emphasizing the city's loyalty to Rome in their preamble while simultaneously adopting most of the populist agenda which Mithradates VI of Pontos had been promulgating.<sup>99</sup> Similarly, Ephesian Artemis herself, essentially Anatolian though her Gestalt and iconography were,<sup>100</sup> was also made to relate to Apollo and Leto and thereby to the Aegean Greek world, just as the members of the Ephesian office-holding class looked up-valley, to foster and cement their relations with a Hellenizing hinterland, while simultaneously opening their city to a flow of useful new citizens from the Aegean states. Yet, that much said, such balancing is much easier if the platform is broad and stable. At bottom it was the Artemis temple, with its wide range of income-generating assets and functions, which gave Ephesos that stability: not automatically, for it had to be intelligently managed, had to respond appropriately to the needs of the various user-markets which Graeco-Anatolian society generated, and had to survive in a competitive environment wherein many temples fell by the wayside. This case-study has

<sup>95</sup> I.Eph. VI 2001 = SIG<sup>3</sup>363.

<sup>96</sup> Polyain. 5.19; Front. *Strat.* 3.3.7.

<sup>97</sup> Hence, perhaps (*pace* Billows 2007: 42), the sparseness of their activity in royals' service: only Megon and Aristod[—] seem to be attested, both in Attalid service (Olshausen 1974: 330 no. 216; Savalli-Lestrade 1998: 133 no. 18 and 145 no.34). I.Eph. VIII, 2 does not list the Hikesios Metrodorou cited by Savalli-Lestrade 1998: 404.

<sup>98</sup> See n. 12 above.

<sup>99</sup> See n. 13 above; Asheri 1969: 72 notes its 'tentativo di controbilanciare' the agenda sketched in Appian, *Mithr.* 189.

<sup>100</sup> Fleischer 1973 and 1978; Burkert 1999.

a wider application too. Alien though the economic logics of the great temples of antiquity are to conventional post-Smith economic discourse, and hard though it is for us to enter a mental world wherein security, stability, and divine trust are goods fully commensurable with profit (cf. Chankowski, this volume), we underestimate both the productive importance of such temples and their institutional centrality at our peril.

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## Labour in the Hellenistic Economy: Slavery as a Test Case

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The Hellenistic economy did not experience profound innovation in the matter of labour. As in the Classical period, four forms of labour coexisted within its geographical range—free co-operation in a context of family or neighbourhood, serfdom, paid employment, and slavery—but with regional differences in the relative importance which these forms had vis-à-vis each other. This is why we cannot begin an essay on labour with the idea of a Mediterranean economy crudely divided between a Graeco-Roman world and an Oriental world, each with its specific characteristics, a model recently and rightly criticized by Manning and Morris 2005 in their Introduction.

Historians are entitled to pose a certain number of questions of rather greater interest, such as: were there changes in this period? Was there a crisis of serfdom? And an increase in slavery? What about paid employment? Yet one must acknowledge at once that our information on most of these topics is inadequate. As I wish to remain fairly precise in my remarks, I shall confine this study to one geographical region, Asia Minor, and within that framework to the question of the position of slavery.

On all the problems which I have just raised, we have as a point of departure the responses of M. Rostovtzeff, as follows (my italics):

Modern scholars, recoiling from the grossly exaggerated and untenable Marxian doctrine regarding the role of slavery in ancient times, are inclined to minimize the numbers of slaves and the part played by them in pre-Hellenistic Greek economy. It must be emphasized, however, that antiquity was *unanimous in believing that slaves were very numerous in the ancient city-states of Greece. . . . These numbers did not decline in the early Hellenistic times.* (SEHHW 2.1258)

The slave trade was thus a prominent element in Hellenistic economy at all periods of its development. . . . In the Greek cities slaves were an important factor in all departments of

economic life. . . . *all the Hellenistic kings made extensive use of servile labour in certain departments of their economic activity*, for example the mines. (ibid. 1260)

But the importance of slave labour . . . varied from country to country. . . . Slavery played a much more considerable role in the economic life of Asia Minor in general and of the Pergamene kingdom in particular. (ibid. 1260–1)

Slavery played a far more important part in the economy of the Pergamene kingdom and probably of the Greek and hellenised cities of Asia Minor than of Egypt and perhaps of Syria also. (ibid. 1106)

Wages being low, the competition of slaves with free labour in workshops and in the fields could not be very keen; indeed slave labour in general was less efficient and probably more expensive than free labour. . . . and the methods of exploiting slave labour were various. Their work . . . was in itself a rival of free labour. (ibid. 1127)

The problem of labour became especially acute in the Greek cities when the great period of civil and military emigration to the new regions of the Greek world came to and end. (ibid. 1127)

There may have been some diminution in the number of human beings sold in the slave markets during the period of the balance of power . . . But with the end of the third century . . . slaves appeared again on the market in vast numbers. . . . With the intervention of Rome in the affairs of the East, a new buyer appeared. . . . These conditions naturally led to a rapid increase in the second and specially in the first century B.C. in the demand and supply of slaves. (ibid. 1259)

The ideas of Rostovtzeff are unquestionably interesting and may perhaps even be in part correct, but the fact is that we are faced with a dilemma: it is impossible to treat the subject as he did. One might say that Rostovtzeff's text gives every appearance of being economic history, but that this is an illusion: in fact at present we are not in a position to be able to write a real economic history of free or servile labour within a chronological framework. Like many others in this context, his text belongs in the category of *meta-narratives*, to pick up the well-known term reused by Manning and Morris (2005: 8–10), that is of broad discursive sketches of a subject which lies beyond the range of scholarly identification. Such is the case when one wishes to speak of the emergence of a market economy in Greece with a labour market, competition between free labour and slave labour, comparison of costs of forms of labour, etc.

I shall offer a more pragmatic account, which will take up various points based on new documents or new approaches, especially in the case of Asia Minor. Here I shall emphasize four aspects which seem to me to be fundamental for the history of slave labour and which will need to be taken into fuller consideration. I should therefore like to put some thoughts forward.

1. Rostovtzeff rightly starts his history of the Hellenistic economy by considering Greece in the fourth century BC. In this respect one fact may be regarded as virtually certain: there were never so many slaves at Athens (or probably in other regions of Greece) as in the second half of the fourth century, as we can verify in the census of Demetrios of Phaleron of 317 BC. I shall not reiterate my argument in detail, since it has been put forward several times elsewhere (e.g. Descat 2004). I simply note that it is based on two principal points. First, for a certain number of thinkers of the Aristotelian School—and this is a major novelty of the late fourth century—the *polis* is a body composed not just of citizens and territory, as conventional political thought would have had it, but also of *chrēmata*, ‘possessions’ (including slaves), and it is essential to comprehend that body in its entirety in order to govern it with real efficiency. The census is the result of the thinking of this group, of this *think-tank* which gained power in Athens with Demetrios of Phaleron. Secondly, in the text which summarizes the outcome of the census, the term *oiketai* does not denote slaves as such but has a much more realistic sense. As Athenaios himself says (6.267e), *oiketēs* refers to all persons who live in the houses, and the word is often used in this sense. One may note a further indication of the importance of slavery. As shown by the appearance of works with the general label *Oikonomikos*, the last of them being the *Oikonomika* of pseudo-Aristotle (probably the work of Theophrastos or of one of his students (Descat 2003)), the Greeks were never so interested in slavery as in the fourth century BC.

2. The development of slavery is bound up with its economic advantages for slave-owners. It is clear that for the Greeks a slave generates new resources and provides a regular revenue. Thus the institution is better adapted to an urban than a rural context, or, more precisely put, to the opportunities emanating from commerce and occupations which a market economy provides (without of course excluding agriculture).

For example we may note the small number of slaves in the celebrated *oikos* near to Sardes which was allocated to Mnesimachos at the end of the fourth century. Probably only the six *oiketai* of the text were slaves, while we have whole villages composed of *laoi* (*I.Sardis* VII 1, with SEG XLV 1642; Debord 1982: 244–7). One may note that the first important reference to slaves in Hellenistic Asia Minor appears in the inscriptions honouring the officer Larichos of Priene, in the first half of the third century, both for slaves in the town and for those in the city’s territory (Gauthier 1980). Our sources do not provide any intrinsic impression of rapid change in rural labour in the early Hellenistic period.

In contrast we may detect that slaves in the urban economy held a certain attraction for Greek proprietors newly installed in the Macedonian Empire.

This is the question of the 'royal workshops'. The theme of these 'royal workshops' or 'factories' derives from the role of the oriental tradition in the Hellenistic kingdoms. As Rostovtzeff puts it, 'The situation in Egypt and probably in other Oriental monarchies of pre-Hellenistic times was different. Here the needs of the royal household were supplied by royal shops, in which thousands of artisans were employed in making beer . . . or working in metal, wood, or stone, weaving or embroidering' (*SEHWW* 1.300). For the Attalids, the aim was to imitate the Lagid model: 'The Attalids organised their *dynasteia* on the Ptolemaic model adapted to local conditions' (*ibid.* 561), and accordingly 'There is no doubt that a large part of the country's agricultural and industrial output was derived from the royal land and the royal factories. In industry slave labour was certainly employed on a large scale' (*ibid.* 564), though he also acknowledges that 'We do not know how work in the royal factories was organised . . . and it is idle to speculate on these points' (*ibid.* 565). Notwithstanding this documentary weakness, the idea has survived. Accordingly, Louis Robert was right to criticize it (1984: 496–9), but since then nothing has been written on the matter.

I believe myself that the error is not to say that the royal factories existed, because they probably did, and the error would be to believe that no important workshop was ever owned by a king. The error is to suppose that for a Hellenistic king the model for the use of slaves was an oriental model. We should shift our viewpoint and consider that the mentions of *ergastēria* in the cities (as at Pergamon, Sardis, Miletos, etc.) reflect not an oriental model but a Greek model. The new inscription from Kyme recently published by G. Manganaro (2000) (*SEG* L 1195) is illuminating on this point. Here the city of Kyme, wishing to enlarge its military capacity, needs shields, and asks Philetairos the dynast of Pergamon for 600, since the Kymaeans are aware of the existence of a shield-factory at Pergamon. The dynast replies (line 17) that 'the workshop which used to make shields has been disbanded', but that since he has a stock of 1,000 shields he will provide the city with the required quantity. We do not know if this workshop consisted of slaves, but it is very probable. That is because we notice a strong similarity of management to the urban Greek workshops which used slaves. At Athens, we know the shield-factory of Lysias' father (*Lys.* 12.19), where perhaps a hundred slaves were employed, and that of the banker Pasion (*Dem.* 36) which should have contained several dozen. The principles of the economics of Greek occupations present themselves again. Investment in artisans' workshops carries high risks if a large number of slaves is assembled, because demand for products is hard to estimate in the absence of serious market information, so no one has confidence in the continuity and success of a business, as a passage of Xenophon's *Revenues* (4.6) well emphasizes. We can see in the text from Kyme that a workshop too has a limited timespan, and the same term is used to denote both the end of production and the end of the workshop itself: the verb

*dialuein* used in the inscription closely recalls the *kataluein* used by Xenophon to describe the difficulties of the workshops. One recognizes therefore the same chaotic operation as in the craftsman workshops of the Greek city, which are constructed according to the needs of the owner without the enterprise having a permanent structure. This is why large workshops mostly specialized in easily identifiable sectors, either luxury products for a social elite or items such as arms which met the needs of the political community. It is not chance that the main slave workshops are arms factories.

There were two main ways for the kings to generate or to increase revenues through artisan activity: in the first place to construct booths in the agoras in order to rent them out (city revenues thereby becoming a component of the royal economy), and secondly to set up workshops if important needs have been identified or if a profit is expected. In this way large workshops can exist with dozens of slaves, often with specialists who are assembled *ad hoc*.

3. In agriculture, slavery probably did not develop so rapidly because of the existence of other forms of forced labour, and at least the evidence of epigraphy shows that it was in the Roman period that slave labour made itself more clearly visible (Bussi 2001) (see below). However, in the light of agrarian practices it is impossible to believe that there was no link between agriculture and slavery. One very interesting problem is posed by the development of farms at the start of the Hellenistic period (Kolb 1996; Lohmann 2001), and in this context by the question of towers erected inside or outside such farms. A full re-examination of their functions has recently been carried out (S. Morris and Papadopoulos 2005) and provides a good basis for consideration. Their article reviews the entire history of the interpretation of this type of construction in the rural landscape, and states that agreement can be reached on their agrarian function. It is clear that these structures attest an intense exploitation of natural resources. Can they be also be associated more precisely with the use of slaves in the way the authors claim?

The difficulties of access to the interior of the towers, due to their defensive aspect, have long been recognized. Entries are often located above soil level, and upper stories are only accessible by ladders. But there are also some more curious aspects. Many of these entries have significant traces of notches on the uprights of the entry-jambs and have marks on the sills. These notches and marks are connected to a system of door-closure which is not effected from the interior of the tower but from the *outside* (with a sort of grille, for example). For the authors of the article, this astonishing system is intended to prevent the slaves kept inside from escaping, and the tower is actually designed to prevent flight. This is pure hypothesis, as the authors themselves recognize, but

this fact poses a real problem and is crucial for the idea of a rapid increase in slavery in rural areas.

On this matter I should like to make the following observations. (a) As Ian Morris (1998) has justly said, the archaeology of slavery is invisible, and it would be astonishing if we suddenly had a clearly visible example, an absolutely distinctive sign of social status. (b) The closure of the towers from the outside does not appear at all the farms. One sees it well in a single region such as central Lycia, studied by Konecny (1997: 55): there is no one system. (c) One should not forget that the closure system can be a later addition after the construction of the tower. If people need it, it is easy to modify. It is a choice made by the owner according to circumstances. Further, we should be very cautious in interpretation. The connection with slave labour may exist, but it is not systematic, and there are different ways of managing such a workforce. Moreover, closure from the outside is the sign of working conditions and of tensions which may hold good at a particular moment in the form of a necessary or essential expedient for using slaves.

Yet one must keep in mind the connection between agrarian structures and the intensification of labour, linked to changes in economic practices. Two different aspects have no doubt played a role: in certain cases patterns of colonization, appropriation, division, and redistribution of land modified rural land-ownership and older social relationships, especially relationships with villages. Elsewhere production opportunities could reshape themselves, more specialised products being oriented towards sale. In this context one may be witnessing not a systematic extension of slavery so much as –a nuanced development shaped by regional criteria yet to be identified.

4. I said above that the Roman period saw a more widespread use of slave labour in rural areas, without our being able to paint a clear picture. An interesting point in this context is the relationship between the history of the slave-market in the eastern Mediterranean and the advent of new owners within the labour system.

Rostovtzeff thought that there was a gradual increase in the number of slaves after the end of the third century BC. For my part, I do not believe in such a gradual and regular process so much as in a more chaotic story. There is a new element leading to a very rapid evolution in the course of the second half of the second century: 'The Romans, having become rich after the destructions of Carthage and of Corinth, used a large number of slaves' (Strabo 14.5.2). The immediate consequence is not just an increased demand for slaves but a violent inversion of the trade itself, accentuated by the continued weakness of the Seleukid monarchy. Two very important consequences follow. The first is an increase in traffic towards Delos, which is merely a staging-post towards Italy (with the well-known phrase of Strabo (14.5.2) on the *myriades* of slaves), but the second is specifically a profound change in the sources of supply,

which Strabo well describes in the same passage by speaking of the southern coast of Asia Minor: 'and the pirates, presenting themselves as slave-traders (*prospoiousmenoi sōmatemporein*)'. One is in the presence of what one might call a *deregulation* of the market, caused by massive demand on the part of Italian masters. It is admittedly hard these days to detach oneself from so obvious a notion as that of the considerable moral and physical violence of subjection to slavery, and to understand that, in the light of the importance of this trade to the economy, little by little in the course of the Classical period the slave-market took shape in a context of ever-stronger legal guarantees to avoid any dispute. There is a norm of guarantees for the buyer against hidden defects, which encompasses sales of animals and of slaves. There is a right of annulment (*anagōgē*) if illnesses concealed by the slave-vendor reveal themselves (Plato, *Laws* 916). There are also professional customs which convey a sort of confidence in the status of the persons being sold. The most characteristic, alike in Greece and at Rome, is public sale by herald, which is a guarantee against chance and risk (Jakab 1997: 32–5). An observation of Strabo in this direction (14.3.2) is relevant: he deplores the fact that in Pamphylia, at Side, slaves are allowed to be sold by the heralds even when everyone knows that they are of free origin, a practice which is precisely contrary to the moral logic of public sale. Such cases were not a legal sale of slaves but pure and simple kidnapping (mainly of Syrians and of the inhabitants of southern Asia Minor).

That period saw arrivals *en masse* on the markets, a fact which carries certain social consequences. It is probably futile to offer a single category of explanation for the war of Aristonikos, named after the pretender to the throne of Pergamon who led a revolt against Rome after the last king of Pergamon, Attalos III, died in 133 leaving his kingdom by will to the Romans. The Greek cities of the region proceed to take sides for or against Rome in a particularly brutal war, notably in Caria. The texts tell us that 'because of the ill-treatment which their masters inflicted upon them the slaves joined in the mad enterprise of Aristonikos and were the cause of great calamities for many cities' (Diod. 34/35.2.26). There have been major differences of interpretation among historians: for some, it was a revolt against slavery; for others it was a political event wherein the slaves found themselves involved, if only to swell numbers, in wars which did not concern them directly (most recently Brun 2004). Reality certainly lies nearer the second interpretation than the first, and the political question undoubtedly lies at the core of the problem, but we cannot eliminate the servile dimension, linked as it was to the transformations of the period. In Asia Minor, such large numbers of free men sold at Delos are a breach in long-established circuits, and that explains the feelings of those who, in greater numbers than previously, became aware of having recently lost their liberty, and could hold the Romans responsible without our perhaps having to envisage a political message bearing on a society without slaves.



Yet, in Antiquity as in the modern era, the economy cannot function without stable bases. Hence, when assessing the importance and the necessity of the use of slaves in the economy, we gain a better understanding of Roman policy after the crisis and after its final variant, the Mithradatic War. The reorganization of the slave-trade in Asia Minor after the abandonment of the Delos market was as vital for Rome as was the organization of political power. We have several indications of this fact, dating from the first century BC. In Phrygia an inscription of Akmonia (*MAMA VI 260*) is a consecration by C. Sornatius, probably the legate of Lucullus in 72 BC, of a *statarion*, a slave-market, and of its *bômos*, which in this instance should be considered as the platform on which the public sale of slaves was held (Bodel 2005). A marker of this same type of market is found also at Magnesia on the Maiandros towards the same period (*I. Magnesia 240*) (for these markets see Descat (forthcoming) in more detail). These hints are not accidental, for they show that in establishing itself as an economic power in Asia Minor Roman power was directed towards ensuring that the supply of a slave work-force, by now a fact of the first order, should come within as legal and uncontentious a framework as possible, in complete contrast to the chaos of the late second century.

It is probable that at the end of the Hellenistic period the use of slaves had become common in a region such as Asia Minor. One cannot specify or quantify its extent, in comparison with other forms of labour, whether constrained or waged, but one can presume that there was a strong tendency in that direction. What matters for understanding the ancient economy is to consider that one has to do with a rational development, taking into consideration not only dominant power-structures but also the emergence of a general awareness of the need for a sound economic structure.

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# Profitable Partnerships: Monopolies, Traders, Kings, and Cities

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## 1. INTRODUCTION

An influential school of thought holds a negative view on the attitude of polities to trade. Ancient states, it maintains, being preoccupied with political and military concerns, did little to encourage or promote trade. If anything, they impeded it by imposing restrictions and marginalizing it as a profession, politically as well as socially. Armed with their ‘command economy’, regimes showed a clear preference for the instruments of predatory imperialism—i.e. coercive exploitation and redistribution—over market principles. The key concept was ‘satisfaction of material wants’, which is not synonymous with the needs of the economy, of trade as such. Force, particularly military force, remained the ideal economic specific, and commercial or commercially inspired wars exist only in the imagination of modern scholars. Taxes were never used as economic levers or as a means with which to improve competition in trade, and even such mercantilistic devices as monopolies were rare emergency measures. In the Hellenistic period, in particular, cities, kings, or tyrants showed hardly any interest in commerce, other than seeing to the needs of their communities for security and subsistence. In short, the relationship between the power of the state and commercial activity remained an uneasy one. The two remained sharply separated for most of the time.<sup>1</sup>

<sup>1</sup> Finley<sup>2</sup> 158, 160–1, 164–5, *et passim*, with the summary of Finley’s views in I. Morris’ Foreword in Finley<sup>2</sup> xii–xxiii. See also Finley 1985: ch. 5 (‘War and Empire’), and Gauthier 1979: 84: ‘S’il est vrai que dans l’Antiquité grecque les cités, les tyrans et les rois ne s’intéressèrent guère au commerce en tant qu’activité économique autonome, en revanche tous eurent le souci d’assurer la sécurité et la subsistance de leur communautés.’ This school of thought owes much to the work of Hasebroek 1928.

This view, however, is beginning to be seriously contested. Alain Bresson, regarding the state itself as 'un acteur économique', poses the following question:

La question clé est précisément l'articulation du comportement prédateur de la cité grecque antique comme moyen collectif d'acquisition de revenus ou d'appropriation du moyen de production essentiel qu'était la terre, avec le rôle du marché comme instrument de circulation des biens. (Bresson 306, with 260)

Similarly, John K. Davies remarks:

However, conventional wisdom maintains that such advances [in war and military technology] had no beneficial civilian spin-off. That proposition needs careful and sceptical scrutiny . . . Considerations of "security" can be predicated of ancient regimes as readily as we see them applied nowadays. Not all military investment and expenditure, by land or sea, is predatory and destructive: some of it can be seen as protection and insurance against damage to persons or animals or property from brigands by land or pirates by sea . . . The costs of such security could be seen as acceptable insurance premiums, and in any case comprised a redistribution of resource (to suppliers, crews, soldiers) rather than a destruction of resource. (Davies 2001: 36–7, cf. Davies 1998: 242)

The remarks of both scholars belong to a wider scholarly reorientation, inside and outside the field of Ancient History. In recent years, at least four collective volumes are devoted to a re-evaluation of the relationship between the ancient state and the economy: *Économie antique: Les échanges dans l'Antiquité: le rôle de l'État*, of 1994; *Production and Public Powers in Classical Antiquity*, of 2000; *Mercati e politica nel mondo antico*, of 2003; and *Le roi et l'économie: Autonomies locales et structures royales dans l'économie de l'empire séleucide*, of 2004.<sup>2</sup> Not only in the specific points they argue, but also in their overall approach to the subject, these works challenge once dominant positions, be it Hasebroek's insistence on state minimalism, or Rostovtzeff's and Heichelheim's exaltation of a free-enterprising bourgeoisie, or again Finley's non-economic, state predatorism.<sup>3</sup> Indeed, even in Ptolemaic Egypt, which is traditionally considered to be the quintessential exemplar of state centralism and economic *dirigisme*,<sup>4</sup> the degree of royal control of the economy is currently under re-evaluation.

<sup>2</sup> Andreau, Briant, and Descat 1994; Lo Cascio and Rathbone 2000; Zaccagnini 2003; Chankowski and Durrat 2004. The issue is addressed by several of the contributions in *Approches*, cf. also Lo Cascio 2006.

<sup>3</sup> Hasebroek 1928; *SEHWW* 1238–78; Heichelheim 1930; Finley<sup>2</sup> 154–8.

<sup>4</sup> Manning 2003; 2006. Also the enforcement by the Ptolemies of strict control over coinage production and circulation within Egypt (Le Rider 1989: 180; Le Rider 1997b: 827) is now questioned: De Callatay 2005. On the Seleucid kingdom, see Schuler 2004: esp. 539: 'Andererseits bedeutete die königliche Herrschaft nicht nur eine Last (i.e. for the *poleis*), sondern häufig auch einen Vorteil.' So also Descat 2004: 573: 'le royaume séleucide n'est pas en État prédateur et n'est pas une organisation simple'.

Some ancient historians, it seems, are being informed by, and have joined, a broader debate that has been going on amongst economists and economic historians of other periods.

For instance, Douglass C. North's emphasis on state-sponsored institutional arrangements as an important variable in long-term economic growth became widely known as a cornerstone-thesis of the New Institutional Economics after 1990. Yet it originates in collaborative work with Robert P. Thomas in the 1970s. North and Thomas argued that the acts of government, rather than being non-economic, play a crucial role in capital accumulation.<sup>5</sup> Still earlier, in 1969, John Hicks had demonstrated how (primarily European) overseas conquests facilitated the expansion of early modern trade by substantially reducing the risks and costs of commerce.<sup>6</sup> All these and related insights supported and further developed the views of a less-well-known scholar, Frederic C. Lane.

Already in 1940, Lane had recognized the crucial importance of the nexus between economics and politics, thus 'anticipating the professional economists by a decade and the political scientists by almost two'.<sup>7</sup> In a number of works, Lane developed his model of *protection and tribute* in an attempt to bring out the economic consequences of organized violence. One major consequence, he argued, was a significant increase in the profits of long-distance medieval and early modern merchants. Lane reasoned that states, being entities skilled in the use of violence, are themselves businesses that produce and sell a particular 'good', protection—hence, North's definition of the state as 'an organization with a comparative advantage in violence'.<sup>8</sup> Tribute and taxes are, according to Lane, the profits made from the transaction. Costs in the establishment and maintenance of the violence apparatus are in fact investments. The price that producers set on their product is frequently subject to negotiation, and it, too, can be sensitive to the mechanisms of supply and demand. Characteristically, these producers are most cost-effective, and so offer their product more cheaply, when they hold a monopolistic position.<sup>9</sup>

Ancient states, too, performed as economic actors, who entered into various forms of cooperation with other economic actors. We are now able to see this

<sup>5</sup> North 1990, 1991. See esp. North and Thomas 1973; 1975; North 1979. That North's work is close to the views of M.I. Finley is an extravagant claim made by P.F. Bang (2009) in his review article 'The Ancient Economy and New Institutional Economics', *JRS* 99: 194–206.

<sup>6</sup> Hicks 1969: 271–2. See also Steensgaard 1973, 1967. Joseph Schumpeter pointed out that 'The capitalist order rests on props made of extra-capitalist material [and] derives its energy from extra-capitalist patterns of behaviour which at the same time it is bound to destroy.' (Schumpeter 1942: 162).

<sup>7</sup> The presidential address of L.E. Davis, 'It's a Long, Long Road to Tipperary, or Reflections on Organized Violence, Protection Rates and Related Topics': *The New Political History*, *Journal of Economic History* 40: 1 (1980): 1–16.

<sup>8</sup> North 1979: 250.

<sup>9</sup> See the articles collected in Lane 1966 and 1979. On Lane's work: Steensgaard 1981.

quite clearly in a particular area. Ancient warfare and other forms of state-sponsored or state-condoned organized violence, rather than being always inimical to trade, impeding its conduct, mostly had a positive, symbiotic relationship with it. That war has a damaging effect on trade *tout court* is a view without much basis in reality. Moreover, protection services, particularly when provided by a major naval state (Lane's cost-effective, power-monopoly holder), reduced considerably the transaction costs of those sea traders who received such services, with a corresponding increase in their profits as a result. I have offered treatment of these topics elsewhere.<sup>10</sup>

In this chapter, responding to the challenge raised by Bresson and Davies, I wish to draw attention to a specific way in which states and private economic actors entered into profitable partnerships: the establishment of monopolies or monopoly-like arrangements. In addition to showing states as initiative-takers for, and chief providers of, the infrastructure sustaining such economic arrangements, the examples adduced below illustrate two further general points. First, that in so doing, states were duplicating a mode of enrichment that had become common among private participants in commerce. Second, that, while they never lost their character as tax-revenue raisers, monopolies or monopoly-like arrangements were first and last formidable weapons in the constant strive to prevail within a highly competitive trade environment; an economic stratagem.

Modern treatments of the topic of monopolies within our period give almost exclusive priority to those of Ptolemaic Egypt (see von Reden in this volume).<sup>11</sup> These will not be at the centre of our discussion here, not because I deem them unimportant, but because the, at least equally important, arrangements attested outside Egypt remain relatively neglected.<sup>12</sup> In Section 2, I look briefly at definitions of 'monopoly' in modern economic literature. Section 3 consists of two parts. In the first, I provide a theoretical and historical context for what follows by means of outlining nineteenth-century debates about the issue of free trade versus monopolies. In the second part, I discuss some of the known Hellenistic monopolies outside Egypt with the purpose of determining their most important features and their place in economic life, locally and more widely. In Section 4, I argue that tax-exemption was a monopoly-like

<sup>10</sup> Organized violence and trade: Gabrielsen 2001; 2005. War and the economy: Austin 1986; Garland 1989; *Guerre*: Chaniotis 2005: 115–41, and Chaniotis (this volume). Reduction of transaction costs: Gabrielsen 2007.

<sup>11</sup> Heichelheim 1933: esp. 158–99; Andreades 1934; Préaux 430–5; Préaux 1954; *SEHHW*: Index s.v.

<sup>12</sup> Summary treatment in Heichelheim 1933: 147–58, 190–1. Commentary on the examples in the Second Book of [Arist.] *Oec.*: van Groningen 1933, who updates and revises Riezler 1907, an enlarged edition of the author's Munich dissertation 'Das zweite Buch der pseudoaristotelischen *Ökonomik*', of 1906. See now the lucid introduction to [Arist.] *Oec.* by Brodersen 2006. The word 'monopoly' is absent from the indices of recent work on the ancient economy (*CEHGRW*; Andreau and Chankowski 2007).

measure. In modern scholarship, monopolies are commonly held up as testimonies to the extensive political and economic dominance of the Hellenistic monarchy; concrete manifestations of the king's claim to unrestricted ownership-rights over the land and its produce. Supposedly they always worked at the expense of cities and those individuals who sought to enrich themselves through free trade. Analysis of a specific document in Section 5 challenges this view. It shows that cities forged partnerships with individuals with a view to establishing monopolies. Run as private businesses, some of these monopolies succeeded in breaking the king's own monopoly.

## 2. MODERN TYPOLOGIES

In his *Realencyklopädie* article, Heichelheim distinguishes between 'private' and 'state' monopolies. He then subdivides the latter into 'political-ethical', 'fiscal', and 'natural monopolies'—the latter meaning the extraction, refinement, and movement of home-grown raw materials. In addition to these types, Heichelheim finally lists those relating to the trade in certain commodities, *Handels-Monopole*.<sup>13</sup> It is easy, however, to see that most of these types can actually describe different aspects of one and the same kind of monopoly arrangement, a kind, moreover, about which abundant evidence survives from one place in the Hellenistic world, Egypt: for instance, a *Handels-Monopol* in linen was at the same time not only a 'state' monopoly but also a 'natural' and a 'fiscal' monopoly. It then becomes equally easy to recognize in all this the basis for Finley's sweeping pronouncement on the importance and character of monopolies in the entire Hellenistic world: 'The Hellenistic kings, however, followed the New Eastern precedent of monopolizing a wide range of economic activities . . . But the motive was strictly fiscal.'<sup>14</sup> Our evidence about monopolies from other places is sparse compared to Egypt. Even so, it does provide us with reasons to be sceptical towards Heichelheim's typology, and towards Finley's selection of such a routinely strong governmental concern—to maximize fiscal revenue—as the sole factor from which to decide the economic significance of monopolies in antiquity.

Modern economic theory, for its part, operates with a different typology. Monopolies are divided into five, somewhat overlapping types.<sup>15</sup> (1) A *bilateral* monopoly describes a situation in which a monopoly seller deals with one monopoly buyer (i.e. a monopsony). (2) A *discriminatory* monopoly is when a

<sup>13</sup> Heichelheim 1933: 147, 149, 150, 154–55; cf. Heichelheim 1938: 228–31.

<sup>14</sup> Finley<sup>2</sup> 165–66, referring to Heichelheim 1933.

<sup>15</sup> For what follows, see ODE s.v. 'monopolies', and Begg et al. 2003: 101–18. I thank Z. Archibald and J.K. Davies for drawing my attention to these works.

single seller sells in more than one market, and need not charge the same price each. (3) A *statutory* monopoly is a monopoly protected by law from entry by rivals. (4) A *sheltered* monopoly is one protected from competition in some way. Much as in the case of a *statutory* monopoly, potential competitors are barred entry by means of legal restrictions, tariffs, licence patents, franchises, and the like. Finally, and most importantly, (5) a *natural* monopoly is generally a monopoly based on an overwhelming cost advantage that results from expansion. For this reason, a *natural* monopoly is linked to economies of scale, where the per unit costs decrease as output increases, that is, the initial capital investment is spread over an increasing number of units of output and so the marginal costs of producing a good or service is less than the average total cost per unit. Here, *natural* is almost synonymous with ‘national-economically and socially beneficial’, since the absence of competitors and the decreasing per-unit costs due to expansion benefit the purchasers. Domestic electricity supply, which until the 1990s was constructed as a *statutory* monopoly, is one example of such a *natural* monopoly. That a monopoly is *natural*, finally, issues from the assertion that a single firm providing a given good or service is more efficient and less costly to a nation or economy than it would be the case if multiple firms provided that good or service. Not all economists, however, wholeheartedly endorse the above definition of a *natural* monopoly or the very existence of such a thing. Some point out that the whole theory of *natural* monopoly is an economic fiction serving an ulterior purpose. It was created by late nineteenth-century economists as an ex-post rationalization of government-sanctioned monopolies.<sup>16</sup> All would agree, though, that *natural* monopoly is a term serving to mark out the good monopolies from the group of bad and undesirable ones. These latter became especially bad and undesirable during a specific period of time.

### 3. EARLY MODERN DICHOTOMIES

Monopolies, especially trade monopolies, and tariffs have been controversial phenomena for a long time. They became even more so from the late eighteenth century onwards, as a new economic theory and novel attitudes to wealth-making were getting off the ground. Guided by the Scottish economist Adam Smith and his French equivalent François Quesnay, one group of thinkers devoted much energy to making ‘free trade’ an article of faith among politicians and more widely. Their exaltation of complete commercial freedom, idealized as what modern economists call ‘perfect competition’,<sup>17</sup> was accompanied by the decrying of monopolies, which they regarded as the

<sup>16</sup> DiLorenzo 1996.

<sup>17</sup> Begg et al. 2003: 101–5.



addiction of wicked, despotic, and backward nations: the early modern state's active support of its national companies and trades, it was urged, had to cede its place to the virtues of free trade.<sup>18</sup> Opposing this new doctrine was another group of theorists, which, headed by the German economist Friedrich List, praised the merits of a 'national political economy'. In his *Das nationale System der politischen Oekonomie*, of 1841 (translated into English in 1885), List argued that the whole doctrine of free trade was applicable and sound only when adopted by all nations. As that was not the case, List had no difficulties in convincing several governments that the British were becoming addicted to free trade simply because it was in their interest as the dominant industrial and political power. In the end, as is known, it was Adam Smith's and François Quesnay's doctrine that won the day; the sharp dichotomy between free trade and monopolies became thus enshrined in subsequent economic thinking.

These theoretical debates were closely linked to major political events, which set the dichotomy in an interesting light. Within Britain, the restrictive Corn Laws stirred up (in the 1830s and 1840s) the conflict between supporters and opponents of free-trade;<sup>19</sup> it resulted in the resolution to satisfy the industrializing nation's growing needs for raw materials and foodstuffs by gaining access to (or forcing open) the markets of the world without paying the customary high tariffs. Lord Palmerston, foreign secretary and prime minister, was among the political figures who warmly supported the application of armed force in order to achieve the higher end of securing commercial freedom. Indeed, wars attended this policy of 'free trade at gunpoint'.<sup>20</sup> In the 1820s and 1830s, for instance, the British were in constant conflict with those states of Latin America which, refusing to sign up to free trade, demanded payment of high tariffs from British importers. Again, in 1840 the British fleet was ordered to the Bay of Naples to force the Bourbon Neapolitan government to abolish the tariffs.<sup>21</sup> Yet another famed instance, finally, is the Opium Wars with China. In 1839–42, the British were fighting the Chinese essentially in order to keep Indian opium flowing freely into China, thus securing the earnings of the merchants (the prime beneficiaries of the abolition of the East India Company's monopoly of the opium trade) and the revenues of their own government. Later, during the Arrow War (1856–60), the second conflict with China, the British presented again commercial freedom as God's gift to mankind, only to prove through their action that 'the cry of "free trade" and international law [was used] to justify a policy of economic penetration in the interests of underlying monopoly'.<sup>22</sup> It was always the monopolies

<sup>18</sup> A Smith 1976; Quesnay 1972, with Vaggi 1987.

<sup>19</sup> Speck 1999: 78–80.

<sup>20</sup> Robinson and Gallagher 1953; Patt 1968.

<sup>21</sup> Davis 2000: 247; Bayly 2004: 137.

<sup>22</sup> Bayly 2004: 138, 271. On the 'Arrow War': Wong 1998.

of others which were bad, never one's own. The state's withdrawal from this one field, announced through the doctrine of free trade, was nothing but a tactic; more precisely, a stratagem.

Talk of the devil. In about 255 bc, Kallatis, a city-state on the west coast of the Black Sea, intended—or was about—to make its neighbour, the *emporion* Tomis, a 'monopoly' (*monopōlion*). This move provoked the immediate reaction of another state, Byzantion. Even though situated outside the Black Sea, Byzantion perceived the plan to be so much against its own interests that it declared war on Kallatis (and its ally Istros).<sup>23</sup> Not many details survive about this event, but the suggestion is that on this occasion the Byzantines posed as warm supporters of free trade.

Not long after, however, Byzantion, the very state that had fiercely opposed the Kallatians' plans for a monopoly, appears itself in possession of its own *monopōlion* within the Bosphorus Straits. For in a year between 255 and 220 bc, Byzantion had purchased the place called Hieron from its legal owner, the Seleukid king, for a substantial amount of money. Situated within the northern entrance of the Straits, Hieron had long functioned as a nodal point in the trade between the Black Sea and the Mediterranean, actually, as the seaward equivalent to a caravan station on land. Our sources do not use the word *monopōlion*. Yet a monopoly is exactly what the Byzantines obtained, since, by acquiring the place, they gained absolute control, fiscal and otherwise, of the commerce passing through the Straits, in particular the fishing business and the trade in slaves.<sup>24</sup>

Some years after it had purchased Hieron, in 220 bc, Byzantion was served a war declaration by a first-rate naval power and a famed trade centre, Rhodes. What caused that war was that Byzantion, using its power monopoly in the area—in particular its fiscal prerogatives—had imposed a toll on all merchant

<sup>23</sup> Memnon of Herakleia, *FGrHist* 434 F 13 (Photios 228a–b): Οὐ πολλῶν ὕστερον χρόνῳ πόλεμος ἀνερράγη Βυζαντίοις πρὸς Καλατιανούς (ἄποικοι δὲ οὗτοι Ἡρακλεωτῶν ἦσαν) καὶ πρὸς Ἰστριανούς περὶ Τύμεος τοῦ ἐμπορίου, ὃ τοῖς Καλατιανοῖς ὁμορον ἦν, μονοπώλιον τοῦτο διανοουμένων κατασκευάσαι τῶν Καλατιανῶν. Διεπρεσβεύοντο οὖν πρὸς Ἡρακλεώτας ἐπὶ συμμαχίαν ἑκάτεροι. 'Not much later, war was initiated by the Byzantines against the Callatians (who were a colony of Herakleia) and against the Istrians about the *emporion* Tomis, which bordered Kallatis, as the Callatians intended to make the place a *monopōlion*. Each side sent embassies to Herakleia to secure its alliance.' Avram (2003: 1187–88, with nn. 15–18, and 1211–12) dates the war to 255–254 bc.

<sup>24</sup> In connection with events in 220 bc, Polybios (4.50.2–3) writes: 'Prousius [I of Bithynia], waging war (sc. against Byzantion) with the forceful effort I have related, had seized the place at the mouth [of the Thracian Bosphorus] called Hieron, which shortly before this the Byzantines, owing to the advantageous location of the place, had made their own, buying it for a large sum of money, as they wanted to leave to no one any operative base whatsoever that could be used in regard to the merchants sailing in the Pontus, or, again, in regard to the slaves and the business of the sea itself [i.e. the fishing business: Walbank, *HCP* 2: 504]. On the commercial importance of Hieron: Gabrielsen 2007: 313–16, with n. 85, for the translation of the passage. See also Moreno 2008.

ships passing through the Straits. This time the role of monopoly dismantler was played by Rhodes. Defending its own interests as well as those of several other merchant-communities that were affected by Byzantium's toll exactions, Rhodes sent its naval arm to remove the toll barrier at the Straits and to re-establish the free conduct of trade;<sup>25</sup> at the same time, Rhodes' ally, Prusias I of Bithynia, snatched Hieron from Byzantium. Rhodes' championing of free trade cannot be separated from her interest to maintain her own monopolies.

For example, seven years earlier (in c.227), Rhodes had received a privilege that, as will be argued below, must be classified together with the other kinds of monopoly. King Seleukos II granted to all Rhodes-based merchants tax-exemption (*ateleia*) in all the ports of his vast realm, a privilege that was re-affirmed by the peace treaty of Apameia in 188 BC. The same privilege had been granted to Rhodes by other rulers and cities and applied equally to Rhodes-based merchants trading with the *emporion* of the granters.<sup>26</sup> Despite an often-stated claim to the contrary (see pp. 235–8 below), *ateleia* was indeed a governmentally regulated instrument that aimed at privileging a specific group of traders with a monopoly-like status, the monopoly being in the area of cost-protection.

I interrupt this citation of examples in order to deal with an urgent question: what kind or kinds of monopoly operated at Kallatis–Tomis and Byzantium–Hieron?

If Tomis was both an *emporion* and a *polis* in the mid-third century BC,<sup>27</sup> then it either was already a dependent *polis* of neighbouring Kallatis, or was intended to become one simultaneously with its conversion into a *monopolion*. Whereas Tomis previously was a simple *polis emporion*,<sup>28</sup> it now was about to attain a new status under the control of Kallatis, that is, a *polis emporion* subject to particular trade regulations and in possession of specialized functions. Byzantium was indeed the right *polis* to react strongly against that change, but hardly the only one to be affected by it; it might have championed the cause of a broader circle of discontented *poleis*.<sup>29</sup> The nature of its reaction—war—may indicate that, alongside the issue of possible trade barriers

<sup>25</sup> Polyb. 4.38.1–10, 45–52. See Gabrielsen 1997: 287–91.

<sup>26</sup> Polyb. 5.89.8, with 21.43.17. See also Polyb. 5.88.7; Diod. Sic. 26.8: *ateleia* granted by Hiero II of Syracuse to those sailing with grain to Rhodes.

<sup>27</sup> Possibly Tomis was a *polis* in Classical times: *Inventory* 940–1 (no. 639). Hind (1995–6: 121) writes that 'the cause of a war between the nearby city of Kallatis and Byzantium in 260 B.C. [was] over the control of trade, presumably that overland across Dobrudja to the bend of the Danube at the coastal end of which Tomoi was situated', but he does not comment on the monopoly.

<sup>28</sup> Some *poleis* had an *emporion*, others were an *emporion*: Hansen 1997: 85–91, cf. Bresson 1993: 223–5; Möller 2005: 184–5. Tomis is believed to belong to the latter group: Avram 2003: 1188–9.

<sup>29</sup> For the inference that Olbia took part in the war on the side of Byzantium: Kozlovskaya 2008: 47, with n. 125.

at Tomis, there was the equally important issue of competition, since it appears that Byzantion itself entertained and shortly after realized its own plans for a *monopōlion*. Faced with war, Kallatis appealed for help to its mother-city, Herakleia (Pontica). Memnon of Herakleia reports how in c.345 BC Timotheos, the tyrant of Herakleia, cancelled debts and loans at interest of those who were in financial difficulties in order to promote commerce,<sup>30</sup> while Pseudo-Aristotle (*Oec.* 2.8, 1347b 1–9; van Groningen 1933: 86) put on record another monopoly scheme of Herakleia. Strictly, however, Kallatis needed no precedents at its metropolis for devising its own monopoly plans.

Byzantion could indeed boast precedents of its own in 220 BC. At a previous date, in order to raise public revenue, this city had created monopolies in a number of trades, among others those in fish and salt, while the assaying of coins was made the monopoly of one bank.<sup>31</sup> Certainly, fiscal concerns loom prominent in this arrangement, as they do also in the decision to reintroduce payment of a toll at the Straits. But state-supported, private enrichment from trade is also an intrinsic part of the arrangement, since a group of traders and other professionals was thereby privileged with the right to hold monopolies of a kind that combined a *statutory* and a *sheltered* monopoly. Possibly, one of the changes to occur with Tomis' transition from a simple *emporion* to one functioning also as a *monopōlion*, was the creation there, too, of a number of *statutory* and *sheltered* monopolies in certain trades; all safeguarded and controlled by Kallatis. The monopolies (*monopōlia*) mentioned in the *dēmosionikos nomos* of first-century AD Kaunos (in Karia) seem to apply precisely to the right to trade in specific commodities.<sup>32</sup>

When Polybios lists the main exports from the Black Sea at large, he singles out high quality cattle, the multitude of humans trafficked as slave labour, honey, wax, salt, preserved fish, and the periodic supply of grain (Polyb. 4.38.4–5); hides could be added to his list. On exiting the Black Sea, all these and other commodities would of course have passed through the Straits. But when Polybios reports the Byzantines' intention to control trade through their purchase of Hieron, he particularly stresses two among these commodities, fish and slaves.<sup>33</sup> The advantages to accrue from the Byzantion–Hieron

<sup>30</sup> Memnon of Herakleia *FGrHist* 434 F 3.1 (*IK* 47: Heraclea Pontica 67), with Bresson 253.

<sup>31</sup> [Arist.] *Oec.* II, 2, 3 1346a 12–1346b 26. Cf. Van Groningen 1933: 54–61.

<sup>32</sup> *SEG* XIV 639, fr. E, lines 3–5: ἀπογράφονται καὶ τεμίσσονται ἐπὶ [τοῦ] τότε [στεφ]ανηφό [ρ]ου [Βασιλέως τοῦ] θεοῦ τὴν ποσότητα καὶ τὰ εἶδη/ τῶν φορτίων [μ]όνων ὅσα μὴ [ὑ]ποκ[είμενα] τῶν μονοπωλίων κωλύεται. Bean 1954: 97–105, no. 38, esp. 103: 'they shall declare for valuation before the stephanophorus of the god Basileus in office at the time the quantity and nature of such of their wares only as are not prohibited under the monopolies.' Since the regulations of this law almost exclusively concern imports (Pleket 1958; Vélissaropoulos 1980: 213 n. 50, with 223–9), and since the document makes reference to individuals who have bought the right to sell a particular commodity (e.g. fr. A, line 8), it is more than likely that these are trade monopolies.

<sup>33</sup> Fish: Bekker-Nielsen 2005. Slaves: Avram 2007.

monopoly, it appears, were primarily based on specialization in the movement of these kinds of goods. Ousting competitors from the slave-trafficking and the fish business via possession of Hieron is expressed by Polybios as follows: 'they [the Byzantines] wanted to leave to no one any operative base whatsoever that could be used in regard to the merchants sailing in the Pontus, or, again, in regard to the slaves and the business of the sea [i.e. fishing] itself' (see n. 24 above). Given the unlikelihood that this refers to the Byzantines' use of force to keep traders away from their harbours, at home and at Hieron, by what other means could they have gained a substantial edge over competitors in these trades? Their considered step to specialize in particular commodities makes first-century AD Alexandria an interesting case of comparison.

Strabo gives a description of Alexandria under the Romans—'the greatest *emporion* of the inhabited world'—and writes the following about the commercial advantages it gained from the sea trade with India and Ethiopia.<sup>34</sup>

but at the present time even large fleets are dispatched as far as India and the extremities of Ethiopia, from which the most valuable cargoes (*ho polytimotatos phortos*) are brought to Egypt, and thence sent forth again to the other regions; so that double duties (*telē*) are collected, on both imports and exports; and on goods that cost heavily the duty is also heavy. And in fact, the *emporion* of Alexandria enjoys a monopoly (*kai gar dē kai monopōlias echei*);<sup>35</sup> for Alexandria alone is not only the receptacle of goods of this kind, for the most part, but also the source of supply to the outside world. (Strabo 17.1.13 [798])

The fiscal revenues which the Romans derived from Alexandria's function as a central place of reshipment take pride of place in Strabo's description—and they can be compared to the revenues (including the toll) derived by the Byzantines. However, such fiscal gains depended on Alexandria's *economic* function as the sole bulking point for goods of this kind (e.g. ivory, perfumes, spices, and precious stones) in the entire Mediterranean world. It had specialized in the import of rare commodities, brought there by very long-distance trade, and in the further distribution of these commodities to Mediterranean customers.<sup>36</sup> This is the meaning of monopoly here. A bulking point like this, in addition to being the sole supplier of certain goods within a wider region—a *qualitative* feature resulting from its specialized function—had an edge over competitors also by virtue of being the biggest supplier—a *quantitative* feature resulting from its commercial-infrastructure advantages. The latter feature is made even more explicit by the remark of an ancient author

<sup>34</sup> See also *Periplus Maris Erythraei* (text and commentary: Casson 1989), with Sidebotham 1986.

<sup>35</sup> In the Loeb edn., H.L. Jones translates: 'And in fact the country has monopolies also.' But *monopōliai* of the Greek text should, in terms of my emphasis on a single 'gateway', be rendered 'monopoly' in the singular and Alexandria, not the whole of Egypt, is meant.

<sup>36</sup> Rathbone 2007: 710–11.

on the preferences of merchants. Merchants, he writes, find it advantageous to sell their cargoes whole (*arthroa ta phortia peprasthai*) at one place without breaking bulk (*mē kotylizein*).<sup>37</sup> Combined, the qualitative and the quantitative features ensured an abundant supply of much-demanded and often high-priced commodities that could be traded at relatively lower costs. Bulking points, in short, worked like magnets on traders. *Specialized* bulking points were tax-revenue machines, formidable demand-creators and demand-satisfiers, and enclaves of cost-effectiveness; all at once.

The Byzantion–Hieron and Kallatis–Tomis *monopōlia* seem to have been broadly of the same kind as first-century Alexandria. Dominance in the supply and movement of particular goods within a wider region placed them in the company of what some modern economists would tend to call *natural* monopolies. It was specialization and their possession of an efficient infrastructural-institutional base which took care of the plentiful input (the inflow of supplies) and the controlled output (satisfaction of a high level of demand) that were essential for achieving a marked cost advantage. An effective naval arm, an ideal geographical location, warehousing and other facilities, financial services, local legal expedients, and a well-organized shipping system, were all part of the infrastructural base. So, too, were the local trade monopolies established in key businesses (banking, trade in salt, fish, etc.) and held by individuals as mixed *statutory* and *sheltered* monopolies. Cutting across all these arrangements, lastly, was the fiscal aspect, often a considerable asset for governments, but never the sole pillar of the *monopōlion-emporion* edifice. To build this latter and hold it in place, private and public capital investment had to join forces. Only unwise powerholders turned their back on trade. Those wishing to increase their revenue from commerce found it most expedient to enter into synergistic relationships with individual businessmen, groups of merchants, or even with whole trading cities. As an economic phenomenon, the *emporion-monopōlion* was the offspring of state-power and private entrepreneurship.

Further examples reveal additional features of the ancient monopolies. Two texts describe the profitable—or rather profiteering—arrangement run by Kleomenes of Cyrene, Alexander's governor in Egypt. Each text, though, stresses a different aspect of it. In his *Oikonomika*, Pseudo-Aristotle focuses on Kleomenes' methods of amassing and monopolizing grain within Egypt (the specialization-side of the arrangement) and on his tax-revenue maximizing motive. At a time of a grievous famine outside Egypt, Kleomenes

forbade the export of grain. On the local governors' protesting at this, saying that they would not be able to pay taxes if there were no export of grain, he allowed the export,

<sup>37</sup> [Arist.] *Oec.* 2.2.8, 1347b 7–9.

but laid a heavy duty on the grain. By this means he obtained a large amount of tax revenue from a small amount of export . . . ([Arist.] *Oec.* 2.33a, 1352a 16–23).<sup>38</sup>

And also,

At a time when the price of grain in Egypt was ten drachmai [a measure], Kleomenes called the growers and asked them at what price they would sell their grain to him. They answered, at a lower price than they were selling to the merchants (*emporoi*). But Kleomenes bade them sell their grain to him at the same price as they sold to others, and he sold it by fixing the price at thirty-two drachmai [a measure] (ibid. 2.33e, 1352b 15–19).<sup>39</sup>

The cost-effectiveness of the whole scheme is indicated by Kleomenes' refusal to buy up grain at a lower price than that paid by merchants. Providing more details, a contemporary speech ascribed to Demosthenes explains how Alexander's governor had established smooth cooperation with a network of merchants and commercial informants, who were strategically located at such trade centres as Athens and Rhodes (the distribution-part of the arrangement).<sup>40</sup> Kleomenes, we are told, was systematically withholding Egyptian grain in his stores, dispatching consignments of it only to cities at which his agents reported that the price was high.

All these men . . . were underlings and collaborators of Kleomenes, the former ruler of Egypt, who . . . did no small harm to your state [i.e. Athens], or rather to the rest of the Greeks as well, by buying up grain for resale (*paligkapēleuōn*)<sup>41</sup> and fixing its price, he himself and these people [the plaintiffs at Athens] together with him. Some of them would dispatch the money from Egypt, others would sail to the various *emporion*, and still others would remain here in Athens and dispose of the consignments. Then those who had come here would send letters to those who were abroad, advising them of the officially set price (*kathestēkyia time*),<sup>42</sup> so that if grain was dear in your market [at Athens], they might bring it here, and if the price should fall, they might put in to some other *emporion* ([Dem.] 56.7–8; tr. adapted from Loeb edn.)<sup>43</sup>

<sup>38</sup> A parallel instance is reported at [Arist.] *Oec.* 2.36, 1353a 15–18: On the advice of Pythokles, the Athenians decided that the state should take over from private citizens the lead extracted from the Laurion mines at 2 drachmai per talent, and then should itself sell it at 6 dr. per talent. Cf. van Groningen 1933: 183–5, 200–1.

<sup>39</sup> Cf. ibid. 33d, 1352b 4–14. On these passages: Andreades 1929: esp. 14; van Groningen 1933: 188–92. Cf. also Le Rider 1997a.

<sup>40</sup> [Dem.] 56.7–8 *et passim*; [Arist.] *Oec.* 2.33, 1352a16–23.

<sup>41</sup> On *paligkapēleuōn*, see Moreno 2007: 231–32.

<sup>42</sup> 'The officially set price', or 'fixed price': Bresson 182–206; Migeotte 2001a: esp. n. 28; cf. Oliver 2007: 28–9. 'The prevailing price': Rosivach 2000.

<sup>43</sup> At ibid. 10, it is said of Parmeniskos, the defendant's partner, that 'when he ( . . . ) had learned the price of grain that was officially set here [at Athens], [he] discharged his cargo of grain at Rhodes and sold it there ( . . . )', trans. adapted from the Loeb edn. See also ibid. 21–2, 29.

The workability of Kleomenes' scheme required an information system that was reliable, fairly speedy and widespread.<sup>44</sup> This feature and especially Kleomenes' use of a multiplicity of markets that were not all charged the same price fit the modern economic definition of a *discriminatory* monopoly. Essentially, Kleomenes was securing a high price by doing simultaneously three things: (a) he was exploiting an existing high demand for grain; (b) he was creating additional demand through use of monopolistic methods; and (c) he was bringing the regulative arm of the political (or command) economy, which he himself represented, into a fruitful co-operation with the principles of the market. The ensuing gains, notwithstanding their being ultimately apportioned into 'public revenue' and 'private profit', were the result of a *single* economic expedient run by *one* group of business associates. Thus, another, more general feature is that monopolies, or monopoly-like measures, did not, as some scholars assume, really draw a line separating the command economy from the free-trade economy. Rather, the line they did draw was, on the one hand, between any given partnership, in this case Kleomenes and his collaborators, and on the other hand practically everybody else.

This is far from being an isolated instance. Monopolies, and monopoly-like arrangements, were more common than is usually claimed.<sup>45</sup> At a much later date, for example, the Jewish king John Hyrkanos is reported to have done with olive oil in Caesarea Philippi pretty much what Kleomenes had been doing with grain in Alexandria, while at a much earlier date the Persian satrap Datames had brought under his control all the retail-traders and craftsmen who were following his army, thus enjoying a complete monopoly.<sup>46</sup> Cooperation between states, or their representatives, and private economic actors is a prominent feature in most instances.

The engagement by kings, satraps, dynasts, or city-state governments in such wealth-generating activities is commonly taken as evidence for mercantilism or the application of economic *dirigisme*, driven by fiscal needs and a concern for securing vital supplies.<sup>47</sup> These concerns are indisputable. But

<sup>44</sup> Kleomenes' network is one among several examples that go counter to the prevailing pessimistic view about information transmission in late-Classical and Hellenistic times—its speed, reliability, and spread: Reger 2007: 469–70. Poor communications may or may not have been the cause of grain-price differences between cities, and [Dem.] 56.3, if anything, shows effective transmission of communication to have been the main variable which enabled merchants to increase their earning, even if they did so through fraud. For the dependence on reliable and speedy information transmission from Hieron (in the Bosphorus Straits) to Athens when setting the rate of interest on maritime loans in the Piraeus: Gabrielsen 2007: 300, 304.

<sup>45</sup> Finley<sup>2</sup> 165–6: 'All ancient states retained at least regalian rights over mineral resources. Beyond that, monopolies in the Greek city-states were emergency measures.'

<sup>46</sup> John Hyrkanos: Joseph. *Vit.* 13.74–75; cf. Heichelheim 1938: 228. Datames: [Arist.] *Oec.* 2.24, 1350b 30–2, cf. van Groningen 1933: 161.

<sup>47</sup> Heichelheim 1933: 147–8, 149, cf. Finley<sup>2</sup> 165: a mercantilistic device, and 166: fiscal aims; SEHWW 1 302: planned economy; Préaux 1954: 324: monopolies allowed the Hellenistic monarchs to convert to cash revenue in kind from the royal lands; see below pp. 239–44.



they fall short of explaining all those instances, in which the partnership between state and private economic actors is of such a nature—tight, durable, and lubricated by a strong commonality of interest for gain—that it far outgrows the concept of *dirigisme*, let alone that of mercantilism. To take the example of Kleomenes, it was as much the network of merchants who had found a powerholder willing to service their economic needs, as it was Kleomenes who had found a team of suitably located professionals ready to assist him in his endeavour. This and additional features will be further exemplified below. The one to be emphasized here, however, is the ambiguity with which monopolies have been (and are being) looked upon. Indeed, in [Arist.] *Oec.*, Kleomenes' scheme is singled out as an exemplar of financial ingenuity worthy of imitation by statesmen. But in [Dem.] 56, it is castigated as a shameless trick devised out of sordid lust for gain. Again, 'profiteering of the most bare-faced description', is how John Hyrkanos' trick is called by an ancient author (Joseph. *Vit.* 13.74–5). Above, we encountered the same ambiguity towards monopolies in our early modern examples and in the views of modern economists. What instanced it?

It seems rooted in a paradox. On the one hand, a number of ancient polities recognized the importance of commercial freedom, and they were prepared to defend it, even at the cost of war, by undoing monopolies. This fact alone flies in the face of the view that commercial or commercially inspired wars in Antiquity are modern scholars' fantasy.<sup>48</sup> There can, of course, be no question about wars waged for opening up markets for exports, and the Byzantion–Kallatis conflict was not the Anglo-Dutch wars. But when states decided to fight in order both to make and to break monopolies the main motive was hardly a wish to ensure vital supplies (foodstuffs and strategic material): Tomis was definitely *not* the lifeline of Byzantion, nor was Byzantion that of Rhodes.

But on the other hand, these same monopoly-undoing states and practitioners of 'free trade at gunpoint' themselves are seen to be engaged in attempts to obtain an economically advantageous position by restricting the freedom of others to increase their wealth through trade. In effect, everyone seems to have gladly subscribed to the notion of free trade—just as long as that

<sup>48</sup> Finley<sup>2</sup> 158–9: 'Hence, there were no commercial or commercially inspired wars in Roman history, or at any time in antiquity. They exist in our books, to be sure: the seventh-century B.C. war over the Lelantine Plain in Euboea, the Peloponnesian War, Rome's wars with Carthage, even Trajan's badly miscalculated and expensive assault on Parthia have all been attributed to commercial conflicts by one historian or another. On investigation, however, it becomes evident that these historians have been bemused by the Anglo-Dutch wars; they have failed to face up to the critical question put to one of them some years ago: "I wonder whether the author means the competition for markets or for the supply of commodities (. . .) As long as these preliminary questions are not even posed, the high-sounding 'explanation' is a mere phrase". When they are posed, the evidence demonstrates that the "high-sounding explanation" is unwarranted and false.' The scholar quoted by Finley is E.J. Bickerman, *AJPh* 74 (1953): 96.

notion did not interfere with *his* monopolies.<sup>49</sup> Incidentally, this is the discord Friedrich List found to exist between ‘free trade’ as an abstract term, or principle, and as a historical reality. Thus, although in theory List in 1841 fully endorsed the principle, in practice he opposed it, pointing out that some states transgress it and will go on transgressing it (see pp. 221–3 above).

Monopolies, we had occasion to note, presuppose the existence of the very thing they seek to put out of function, free trade. If there ever was a common characteristic shared by warfare and economic activity, it is the logic operating here. It exploits the two properties—strength and weakness—that make accepted conventions meaningful. Creating a weakness on opponents, which is then exploited to one’s own advantage, is the essence of strategy, the art of ‘throwing rocks at eggs’, as an ancient Chinese military historian put it.<sup>50</sup> Here, however, the modalities of the stratagem are applied within the economic sphere; as a result, the economic stratagem has inherited the ambiguity inherent in its military counterpart. Polyaeus’ work on military stratagems (*Strategemata*) can be fittingly placed at the side of Pseudo-Aristotle’s collection of economic ‘ruses’ in Book Two of his *Oikonomika*.<sup>51</sup> The latter exemplifies the financial ingenuity displayed by rulers and political assemblies in times of financial exigency, fictive or real; and since its aim is to show how these won advantage through the use of *stratēgēmata*, the ‘rock-throwers’ it parades are naturally all governments or rulers. But in the real world, the hands holding the rocks were mostly those of partnerships formed by state representatives and private entrepreneurs. According to Aristotle, it was wealth-getting (*chrēmatistikē*), ‘a universal principle of business’, that brought the two together; monopolies constituted the means through which they achieved their common end. What kind of monopolies had Aristotle in mind?

States possessing raw materials have always exploited this gift of nature. Describing the abundance of certain resources on the island of Lipara, especially the richness of its famous mines of styptic earth (*styptēria*), Diodorus offers the following explanation of the fact that the Liparians and the Romans derive great revenue from them:

For since styptic earth is found nowhere else in the inhabited world and is of great usefulness, it stands to reason that, because they have a *monopōlion* and can raise the

<sup>49</sup> On 2 Feb. 2009, the world news media announced U S President Barack Obama’s plan, as a remedy to the ongoing economic recession, to launch a ‘buy only American’ campaign. European Union leaders reacted immediately against the plan, likening it to the widespread interwar protectionism, which had catastrophic consequences for the world economy: cf. the Danish daily *Berlingske Tidende* of 2 Feb. 2009.

<sup>50</sup> Sun Tzu 1971. Moreno (2007: 229–30) acutely observes the association of the *kapēlos*, who was famed for resorting to deceit, to the partridge, which is known to feign lameness and injury in order to avert attention from the young.

<sup>51</sup> Compare Datames’ military stratagem (Polyaen. *Strat.* 7.21.1) with his economic stratagems ([Arist.] *Oec.* 2.24a–b, 1350b 16–32).

price, they should get an unbelievable amount of money; for on the island of Melos alone is there found a deposit of styptic earth, but a small one, which cannot suffice for many cities. (Diod. Sic. 5.10.1–3)

A similar example is the rich and very easily accessed gold deposits—said to have yielded ‘nuggets as big as a bean’—in the region of Aquileia, a Roman colony near the head of the Adriatic and connected to the sea by the River Natiso; in Strabo’s time Aquileia was an *emporion*.<sup>52</sup> It is reported that, after the Italians and the local Tauriskoi jointly had been working the mines of the region for two months, the price of gold throughout Italy at once fell by one-third, a result of the boost in production/extraction and so in supply. When the Tauriskoi became aware of how great an advantage the mine could offer, they ‘threw out their collaborators (*tous synergazomenous*) and made a monopoly of it (*monopōlein*)’, that is, they dissolved their partnership, kept production rates high, but restricted output in order to secure a high price.<sup>53</sup>

In contrast to the Alexandria-type of *emporion-monopōlion*, which stands out for its exclusive concentration of commodities brought from elsewhere, the *monopōlion* of the instances just cited is characteristic of states which themselves possessed aplenty a scarce resource in high demand. The timber and pitch reserves of Macedon, the silver of Attica, the ruddle of Kea, the silphium of Cyrene, the palm-trees and balsam trees of Judea, the papyrus in the Nile delta, and the salt-pans of various places are a few among many examples.<sup>54</sup> Exploitation, though it does require the participation of private professionals, is mainly under governmental control, and takes the form of (a) regulating output in order to maintain a high price;<sup>55</sup> and (b) taxing exporters (save those privileged with tax-exemption), or even demanding payment of toll for passage (*diagōgē*) from and to the points of production and shipment. Important though it is, this kind of monopoly will not receive further treatment here. It is not the kind Aristotle had in mind. The one he speaks of was, like the *emporion-monopōlion*, artificially created.

In the *Politics*, Aristotle points to the need for a collection ‘of the scattered accounts and methods that have brought success in business to certain individuals. All these methods are serviceable for those who value wealth-getting (*chrēmatistikē*)’ (*Pol.* 1259a 2–7, tr. H. Rackham, Loeb edn, cf. *Arist. Rhet.* 1359b 23). In support of this Aristotle offers two examples of individuals who ‘contrived cunningly to secure themselves a monopoly’ (*heautois*

<sup>52</sup> Strabo 5.1.8 [214]: the *emporion* had been given over to those tribes of the Illyrians that lived near the Ister.

<sup>53</sup> Polyb. 34.10.14, with Walbank, *HCP* 3. 612–13, referring to the location that has been proposed for the gold mines.

<sup>54</sup> Macedon: *IG* I<sup>3</sup> 89 (Syll.<sup>3</sup> 135). Keos: *IG* II<sup>2</sup> 1128. Cyrene: *Arist. fr.* 528 (Rose); Judea and Nile delta: Strabo 17.1.15 [800]. Salt: Davies 2001: 24–5; Lowe 2001: 189.

<sup>55</sup> Restricting to a few places the production or cultivation of raw materials is regarded as a way in which to obtain a higher price: Strabo 17.1.15 [800].

*etechnasan genesthai monopōlian*, *Pol.* 1259a 31–2); one concerns the philosopher Thales of Miletus, the other an unnamed individual from Syracuse (cf. Riezler 1907: 50–3).

Thales, being poor and taunted with the uselessness of philosophy, set about to prove that philosophy could indeed make him a wealthy man. Using his knowledge of astronomy, he predicted an exceptionally large olive harvest. He then raised a small amount of money, which he paid around as deposits for renting all the olive presses in Miletus and Chios, and at a low rent at that, since nobody was competing with him. When the good harvest arrived and olive presses suddenly became in high demand, ‘Thales let his presses out on what terms he liked, realizing a large sum of money.’ In Aristotle’s second example, the unnamed individual from Syracuse cornered the iron market by a similar method. Using not his own money but a sum deposited with him, he bought up all the iron from the iron foundries. Afterwards, ‘when the merchants came from the various *emporía* (*ek tōn emporiōn emporoi*), he was the sole seller; though he did not greatly raise the price, he nevertheless made a profit of a hundred talents from his capital of fifty’.

It is, of course, not the historicity of these examples with which we are concerned, but rather with two principal points they seek to establish. One is that each of these individuals proved proficient in the art of, so to speak, making competitors into eggs and his own monopolistic advantages into the rocks to be thrown at them. The other is brought out by Aristotle’s final comment:

this device of taking an opportunity to create for oneself a monopoly (*monopōlia*) is a universal principle of wealth-getting (*chrēmatistikon*); hence *even some states* have recourse to this plan as a method of raising revenue when short of funds: they introduce a monopoly of marketable goods (*monopōlian gar tōn ōniōn poiousin*) . . . An acquaintance with these devices is also serviceable for statesmen, for many states need financial aid and modes of revenue like those described . . . (Arist. *Pol.* 1259a5–39, Loeb edn.)

My emphasis of the phrase ‘even some states’ is intended to draw attention to the connection made here between three things: (a) the need registered by Aristotle for a collection ‘of the scattered accounts of methods that have brought success in business to certain individuals’; (b) his conviction that it will be beneficial for states to replicate the successful wealth-getting schemes of non-state monopolies; and (c) the compilation, in Book Two of Pseudo-Aristotle’s *Oikonomika*, of examples of such economic stratagems (including monopolies), devised by rulers and city-governments.<sup>56</sup> In Aristotle’s analysis,

<sup>56</sup> See van Groningen 1933: 44; Brodersen 2006: 14. The work is commonly dated to the last quarter of the fourth century BC: van Groningen 1933: 37–48, but Aperghis 117–35 dates it to c.275 BC.

monopolies are first and foremost devices of economic significance (*kata-noēma chrēmatistikon*: *Pol.* 1259a 7), as they constitute ‘a universal principle of wealth-getting’; their fiscal aspect comes second. Adherence to this principle brings under one type of economic behaviour different kinds of economic actors: individual monopoly-holding merchants like Thales; monopoly-running networks like that of Kleomenes; and such monopolistic cartels as those formed by grain-dealers and their tax-revenue franchising equivalents in Classical Athens.<sup>57</sup> To regard monopolies as economic stratagems is to recognize that they rely just as much on the use of coercion as they do on free trade. Which ought to cause little surprise: that coercion and voluntary barter are not incompatible is perhaps *the* feature that makes trade a very complicated social act.<sup>58</sup>

Economically, the monopolies of Thales and the unnamed Syracusan share an important feature with the Alexandria-style *emporion-monopōlion*: cost-effectiveness. The oil press and iron monopolies yielded high profits (the Syracusan doubled his investment) from relatively low investments (Thales’ low rent payments) and a fairly moderate sales price (the Syracusan sold at only slightly above the current market price). Just as it would have been the case if Thales and the Syracusan *produced* these commodities, the per unit costs decreased as the number of units of output increased. It was high demand, created artificially and maintained by the monopoly-holder, which ensured cost-effectiveness, and had Thales and the Syracusan been able to do what the *emporion-monopōlion* was equipped to do—secure control over a constant inflow of supplies—then their respective businesses would have been steadily expanding thanks to the effects of the lower costs–higher profits spiral.

Finally, on the question about the area in which monopolies enjoyed prevalence Aristotle is explicit: it was the private rather than the public sphere. Certainly, sometimes the two spheres were at loggerheads. No sooner had the thrifty monopolizer of iron in Syracuse doubled his fifty talents to one hundred than the tyrant Dionysios I had him and his newly made fortune thrown out of Syracuse, ‘since he was inventing means of personal enrichment that were detrimental to the tyrant’s own affairs’ (*Arist. Pol.* 1259a 28–31). In many other instances, however, concord and cooperation between the public and the private actors obtained. The following monopoly-like arrangement lends further support to this.

<sup>57</sup> *Lys.* 22 (*Against the Grain-Dealers*), esp. 7, 14–15, with Moreno 2007: 215–20. Profit-greedy cartels rigging the Athenian *pentēkostē*-tax franchise during the auction: And. 1 (*On the Mysteries*) 133–6. Agyrhios, the proposer of the Grain-Tax Law of 374/3 BC (Stroud 1998: 4–5) was the leader (*archōntēs*) of one such group.

<sup>58</sup> Steensgaard 1981: 265.

4. TAX-EXEMPTION (*ATELEIA*) AND THE ECONOMY

Some recent studies recognize the economic significance of tax-exemption.<sup>59</sup> Yet the orthodox view remains that formulated by Finley in 1973:

It is certain, however, that in the great majority of instances the services [sc. for which a person was granted tax-exemption] were political or philanthropic, not services to trade and industry, and certainly not to export . . . In any event, the very existence of honorary personal tax exemption tells us much of itself. It tells us that what we should call the impact of the tax system on the economy was not within the Greek conceptual world. Never is there a hint that exemption from harbour-taxes was conceived as a contribution (fair or unfair) to the recipient's competitive position in trade or manufacture; it had the same standing as reserved seats in the theatre. Taxes were not used as economic levers. (Finley<sup>2</sup> 164)

This perception of *ateleia* as a privilege with little or no impact at all on economic activity, supposedly because the honorand was never expected to make use of it, goes hand in hand with another perception: that a distinction must be drawn between honorary *ateleia* and *ateleia* as a 'privileège de fonction'. Not only are both perceptions based on unsupported assumptions; they are contradicted by our evidence.<sup>60</sup>

Tax-exemption was one of the privileges granted by kings, *poleis*, and federations to a named individual, to a specific group of individuals, or as a block grant to a whole political community.<sup>61</sup> Usually the recipient was a member of a different community from the one granting the privilege. Our sources show that underneath the term *ateleia* there is substantial variation as regards procedures and as regards the obligations from which recipients are

<sup>59</sup> Gabrielsen 2007: 298–9, cf. Gabrielsen 73 (Hellenistic Rhodes); Marcellesi 180–3 (Hellenistic Miletus); Oliver 2007: 30–7 (late-Classical and early Hellenistic Athens); Rubinstein 2009; Davies (this volume). Bresson 138–49 explains how grants related to commerce worked, and how *ateleia*-holders may have been identified in the granter's harbours. Rubinstein 2009 explores the legal issues that might arise between tax-farmers and *ateleia* holders. Block grants are excluded from her study.

<sup>60</sup> Rubinstein (2009: esp. 114–15, 127) refers to scholars drawing a distinction between honorary *ateleia* and *ateleia* as a 'privilege de fonction' (mainly Gauthier 1991), and n. 18 to scholars viewing *ateleia* grants (alongside Hellenistic *proxenia* grants) as empty honorific gestures. Even though in a few, specific cases *ateleia pantōn* might have approximated *isoteleia* (the right to pay the same taxes as citizens, so Knoepfler 2001: 55–61 from documents from Delphi and Eretria), Rubinstein (n. 18) rightly warns against drawing sweeping conclusions, see e.g. Marek 1984: 157–60: *ateleia* received together with *proxenia* was in fact nothing more than *isoteleia*. From her study of a rich epigraphic material Rubinstein concludes that 'the division of *ateleia* grants into the categories of honorary and incentive-related is to some extent artificial' (2009: 127). In spite of this, however, Rubinstein maintains that division because 'The grants that clearly were intended primarily as tax incentives differ from the honorary grants in so far as the *polis* issuing them must have regarded it as not only likely but in fact certain that the grant holder would want to exercise the privilege' (ibid.).

<sup>61</sup> Oehler 1896; Migeotte 2001a; Knoepfler 2001: 55–61; Rubinstein 2009.

being exempt. For one, the kind and number of taxes covered may vary significantly from one grant to another: while for example in some cases the exemption applies to 'all taxes' (*ateleia pantōn*),<sup>62</sup> in others it applies only to one or more specific charges, such as import and export taxes, taxes on specific commercial activities or particular commodities, harbour dues and the like.<sup>63</sup> For another, variation is also seen not only in the reasons for and terms on which the privilege is obtained, but also in the occasions it is bestowed. It is not least the attested differences among such and other factors that enable us to distinguish between *ateleia* (a) as one of the honours bestowed by state-decree to a foreigner in return for services rendered; (b) as a special concession by a *polis* to an individual or a group of individuals with a view to enlisting their services or goodwill; and (c) as a gift awarded from one state to another in order to return a favour and/or strengthen their relations.

Yet neither these differences in formal procedure, nor the questions of *who* issues the grant, *to whom*, on which *occasion* and with what *motivation* seem—as the orthodox view supposes—to have had any bearing on the privilege itself. The purpose of all *ateleia* grants unexceptionally was to free the holder from a specific duty (*telos*), or set of duties (*telē*); and, in as much as these duties related to a financial obligation (as they often did), to free him from a monetary charge that he otherwise had to pay.<sup>64</sup> As far as we can tell, when granting the privilege *poleis*, kings, and federations never based their decision on whether or not the holder (or his descendants) was ever going to make use of his exemption and how often. That states did bother with these issues, and that they somehow had the means of ascertaining whose *ateleia* privilege was real and whose only an 'empty honour' are modern assumptions without any support in our evidence. It is therefore misleading to say that the *ateleia*-privilege had the same standing as reserved seats at the theatre. Whenever it was effectuated, it had a direct impact on the revenues of a city and on the economic circumstances of those enjoying it. In fact, it possessed several of the characteristics of a monopoly.

Of special interest is the economic significance of *ateleia* bestowed on whole communities for the benefit of traders. To cite just a few examples, merchants exporting grain from the kingdom of Bosphorus to Athens during the rule of Leukon (389–349 BC) were exempt from the one-thirtieth (or 3.3 per cent) tax.<sup>65</sup> Similarly, the Seleukid king Antiochos IV privileged with *ateleia* all

<sup>62</sup> See e.g. Rubinstein 2009: 121, with nn. 23, 25, 28.

<sup>63</sup> See e.g. the document from Kimolos (Jacobsen and Smith 1968: lines 30–2): *ateleian pantōn hōn an eisagōsi ē exagōsi ek Kimōlou tas pentēkostas tas enlimentiou* ('exemption from the 2 per cent *ellimenion* tax on all the merchandise imported into or exported from Kimolos'). Cf. Vélissaropoulos 1980: 210.

<sup>64</sup> On the term *telos/telē*, see Schwahn 1934; Vélissaropoulos 1980: 205–31; Waanders 1983; Chankowski 2007: 305–28, esp. 307–19 (various categories).

<sup>65</sup> Dem. 20.32; *Syll.*<sup>3</sup> 212. Cf. Moreno 2007: 175–6, 189, 253, 260–1.

those Milesian merchants who imported into his kingdom produce from the territory of Miletus.<sup>66</sup> Above (p. 224), we noted the *ateleia* granted to Rhodes-based merchants in all the harbours of the Seleukid realm. Harbour taxes per se (e.g. the *ellimenion*), of course, were but a few among a whole array of fiscal obligations that the Seleukids ordinarily imposed on their subjects.<sup>67</sup> In these and all other instances, merchants qualifying for the privilege experienced a marked reduction of their transaction costs. Relieved from often high local tariffs, they thus obtained a considerable competitive edge over the non-*ateleia*-holding merchants who traded in the same ports.

To illustrate how great the difference between the costs of the two groups could be, we can take the one-thirtieth tax on the export of grain from the Bosporan kingdom. If each of two merchants loaded his ship with 3,000 *medimnoi* of grain at the cost of 6 drachmas per *medimnos*, then the one enjoying *ateleia* would come off 600 drachmas cheaper than his competitor. Demosthenes calculates the advantage as follows: For every 300,000 *medimnoi* of grain they exported from the Bosporan Kingdom, Athens-bound merchants were given 10,000 *medimnoi* (some three shiploads) for free on account of being exempt from the one-thirtieth tax (Dem. 20.32). The very institutional mechanism that offered cost-protection to one merchant stood as an economic barrier for another. This feature makes the *ateleia*-privilege comparable to a *sheltered* monopoly. Inevitably, by its presence or absence *ateleia* influenced not only the earnings of traders but also the price at which their commodities were sold in the market. For whereas tariff-paying merchants might try to transfer such expenses to the buyers, those exempt might decide to sell their goods cheaper than the former. Thus ancient states, especially big hegemonic powers, can be regarded as the first large-scale insurance companies that made it possible for privileged groups of merchants to be cost-effective and thus increase their profits substantially. All this discredits the view that taxes were never used as economic levers.

The larger the area within which grants of *ateleia* applied, the greater the economic advantage to be had by the privilege-holder, whether a named individual or a city. Around 306 BC, Malousios of Gargara and his descendants were honoured with personal tax-exemption from 'whatever they sold or purchased' in all the cities of the Troad Confederation.<sup>68</sup> To be sure, enjoying tax-exemption in all the ports under Seleukid control,<sup>69</sup> as did all merchants operating from Rhodes, was economically not a trivial matter. To make the

<sup>66</sup> Herrmann 1965, 73 II and III, lines 3–6 (of c.167–160 BC); cf. Bresson 127–8, 257–8; Marcellesi 170, 180–3.

<sup>67</sup> Survey of the taxes demanded by the Seleukids in Schuler 2004: 526–38, with further bibliography; Aperghis 137–71. See also Aperghis (this volume).

<sup>68</sup> *I. Ilion* no. 1, lines 18–19; *Syll.*<sup>3</sup> 330; *Emprunt*: no. 79 (c.306 BC).

<sup>69</sup> Aperghis 160, noting the distinction made by the Seleukids in the case of Iasos between exemption from city and port taxes: cf. Wörrle 1979: 110.



operational base of their *ateleia*-privileges larger and more lucrative, Hellenistic kings might strive to amass as many *telē* (taxes) as possible under their authority, thus expanding the fiscal armoury from which to indulge favourites. There is some evidence to suggest that the Seleukids were keen in converting city-taxes (*politika telē*) into imperial, or royal, taxes (*basilika telē*), that is to say, in appropriating taxes over which a *polis* hitherto had authority (i.e. was *kyria*: I. Iasos 33, line 8).<sup>70</sup> Under Antiochos III, for instance, Herakleia in Caria had its harbour dues taken over by the king.<sup>71</sup> Thereby Antiochos increased his sources of revenue, but at the same time he expanded the area in which beneficiaries could be given a competitive edge. At other times *ateleia* was used in order to help a city earn extra tax-revenue and to enable a designated group of merchants to enrich themselves by outdoing competitors: when Antiochos IV privileged with *ateleia* all Milesian importers of goods from Milesian territory into his kingdom (see n. 66 above), he did so with the express purpose of increasing ‘the city’s [Miletus] revenues and the profits of private individuals’.<sup>72</sup> Cities, too, might devise arrangements that brought *ateleia*-privileged groups of buyers and sellers into a mutually profitable economic interaction—all at the expense of those not so privileged. For instance, the cities of Kyme (in Aeolis) and Ilion show a record of *ateleia* that was granted both to a named outsider and his descendants *and* to any one who traded with them; here, monopoly is coupled with something that approximates a *monopsony*.<sup>73</sup> This evidence alone is enough to show that it is neither ‘state-predatorism’,<sup>74</sup> nor ‘state-interventionism’, nor again ‘mercantilism’ which can adequately describe this kind of arrangements. What characterizes them is rather their being the products of synergistic relationships between governments and private economic actors. Monopolies or monopoly-like schemes occupy a central place in them.

## 5. KINGS, CITIES, AND TRADE-MONOPOLIES

In her article ‘Sur les origines des monopoles Lagides’, of 1954, Claire Préaux objected to the current view that the monopolies of Ptolemaic Egypt, besides being different from those attested in the Greek world, had been constructed

<sup>70</sup> Wörle 1979: 107, 110.

<sup>71</sup> Wörle 1988 (SEG XXXVII 859) B III, from between 196 and 193 BC; cf. Ma 1999: 340, no. 31, and p. 133 (commentary); Migeotte 2004: 216–19.

<sup>72</sup> Schuler 2004: 538: ‘Diese Privileg war keine lediglich symbolische Geste, da die Milesier eigens den grossen finanziellen Gewinn betonten, den die Stadt als ganze und die einzelnen Bürger daraus zogen.’ Cf. Briant 1994: 71, 76.

<sup>73</sup> I. Kyme IV–VIII: I. Ilion XXIV, with Rubinstein 2009: 124–5.

<sup>74</sup> See Descat 2004: 573 (with special reference to the Seleukids).

on models from Pharaonic Egypt.<sup>75</sup> The models, Préaux argued, had rather been provided by the Achaemenids and King Antigonos I Monophthalmos. In these empires, just as in Ptolemaic Egypt, monopolies offered themselves as a practical solution to a major problem facing rulers: namely, how to convert into cash revenue what was coming in from the royal land (*basilikē chōra*) as tribute in kind. Restricting or banning ‘foreign’ imports, not least of foodstuffs to the cities of the empire, and forcing these cities to buy only their king’s own produce, was the method facilitating the conversion process. Royal monopolies made up the principal mechanism of these schemes. Thus Préaux agreed with Rostovtzeff that the royal initiatives in this area were part of the existing circuits of economic exchanges.<sup>76</sup> Recently these views have received support from Pierre Briant, who on the bases of Achaemenid and Hellenistic evidence argues that to a large measure these royal initiatives were economically motivated, since they aimed at generating a monetary surplus for the king.<sup>77</sup> A rival school of thought, however, even though it does accept that the Hellenistic rulers established monopolies, holds that their motives were primarily political, aiming at achieving economic equilibrium within the empire.<sup>78</sup>

Characteristically, both those who subscribe to Préaux’s view and those who oppose it base their case almost entirely on a well-known pair of documents from c.303 BC: Antigonos Monophthalmos’ letters concerning the planned political merger (*synoikismos*) between the cities of Teos and Lebedos.<sup>79</sup> In these letters, Antigonos, following consultations with ambassadors from the two cities, communicates his decisions on a number of issues concerning the merger, one of which is about finances (RC 3, lines 72–94). This section is especially interesting also because in it the king reveals his general policy vis-à-vis the cities within his realm. Accordingly, while modern scholars disagree about the character of Antigonos’ monopoly (a political or an economic measure?), they all seem to agree that the text in lines 72–94 confirms the general rule that, despite slogans about civic ‘freedom and autonomy’ (line 89), the cities were in fact at the mercy of the kings, depending heavily on food from the royal lands, experiencing damaging economic restrictions and on the

<sup>75</sup> Préaux 1954: esp. 318, 324, *contra* Andreades 1934; Heichelheim 1953.

<sup>76</sup> Rostovtzeff 1910: 241 n. 1.

<sup>77</sup> Briant 2004. Cf. Will 1960; Wörle 1988: 469 nn. 221, 225; Billows 287, with n. 2.

<sup>78</sup> Fantasia 1984: esp. 74–5, following Gauthier 1979. In his analysis of the Samothracian decree honouring the Ptolemaic commander Hippomedon (IG XII (8) 158; *Syll.*<sup>3</sup> 502; Fraser 1960: 39–40: reign of Ptolemy III), Gauthier rejects the view that the Hellenistic rulers took an interest in commerce: Gauthier 1979: esp. 78 n. 9, and 84 n. 22, referring to Hasebroek 1928 and Finley<sup>2</sup> [originally of 1973]. Billows: 286–91 sides with Préaux, but he also emphasizes the king’s wish, by means of monopolies, to make the empire as self-sufficient as possible.

<sup>79</sup> *Syll.*<sup>3</sup> 344; RC 3/4 (date at p. 25); SEG IV 618, with Wilhelm 1935.

whole suffering all the consequences of royal exploitation.<sup>80</sup> However, the interpretation of the relevant section that is offered in the following departs rather radically from the conventional one. The picture it draws of the economic relationship between king and city is different from the one customarily met in modern scholarship.

In modern discussions, the inscription RC 3/4 has become famous mostly because of Antigonos' answer to the initial request by the city of Lebedos for permission to import grain, a permission which Lebedos finally got (lines 90–4). The king's response runs as follows:

Previously we were [unwilling] that [any] city should be given the right to import grain (*didosthai ta sitēgēsia*) and that a grain-reserve should be established (*sitou gignesthai parathe[sis]*),<sup>81</sup> [for we were not willing to have the] cities spend often large sums of money for this purpose unnecessarily; [we did not wish] even now to do this, as the tributary [territory] (*hē phorologoume[nē chōra*) is near by, [so that if there] is [need] for grain, we believe it is easy to have [as much] as one wishes brought from [it].<sup>82</sup>

Immediately after this, Antigonos adds that his policy was not motivated by self-interest, for he had no personal gain from this matter, but by a sincere concern that Lebedos and other cities may become free of debt.<sup>83</sup> As regards the first part of this statement, the king is not being entirely honest; as most scholars recognize, Antigonos did in fact have a strong personal interest in the matter. As regards the second part, however, there is some truth in the king's words. His anxiety about the indebtedness of the cities refers to a situation which is independently attested by abundant epigraphic evidence and therefore seems real and justified: public indebtedness was a chronic feature of city finances (see n. 91 below). That was also the case here. For what Lebedos intended to do—and what other 'indebted' cities apparently were in the habit of doing—was, according to our document (lines 72–80), the following:

<sup>80</sup> e.g. Fantasia 1984: 288; Billows 287; Bresson 299; De Callataÿ 2004: 39; Aperghis 185; van der Spek 2007: 415.

<sup>81</sup> On *sitou parathesis* (the establishment of a permanent grain-reserve), see Gauthier 1979: 88 (honorific decree for Epinikos, 240–221 BC), line 34, with L. Robert, *Studi Classice* 16 (1974): 85–8; *Emprunt*: 130 n. 397, 137 n. 418, and esp. Panessa 1982; Migeotte 1991; Migeotte 1998.

<sup>82</sup> Lines 80–4, tr. adapted from RC pp. 22–3.

<sup>83</sup> Lines 85–8: 'since you and everyone else [knows that there is] no private profit [for us] in the business, but we maintain the regulation [in the hope that] the cities may become free of debt.' Welles' translation (RC, p. 23) of the Greek text: ἐπεὶ ὅτι γε ἰδίαι ἐκ τοῦ πράγματος οὐθὲν γίγνεται ἡμῖν, γινώσκετε | [ὅ]μεις καὶ οἱ ἄλλοι πάντες, ἀλλὰ συντάσσομεν ταῦτα θε[ω]ροῦντες ὅπως ὦν ὅ[φ]εῖλουσιν αἱ πόλεις ἐλευθεροὶ γένωνται. Préaux (1954: 320–1) proposed to replace ἡμῖν, in line 86, with ὑμῖν, but see J. and L. Robert, in 'BE' 1955: no. 190, and Fantasia 1984: 289 n. 13.

1. With the king's permission, a city established a fund from which to purchase and stock grain for a year (*eis sitou parathesin*). The grain fund of the Lebedians amounted to 1,400 gold staters.<sup>84</sup>

2. Still with the king's permission, the amount of money making up the fund was excluded from the total revenue of the city (*exaireisthai apo tōn prosodōn*); i.e. the amount was deducted when the city was required to pay tribute (*phoros*) or irregular monetary contributions (*syntaxeis*) to the king.<sup>85</sup> In the present case, the Lebedians were allowed to deduct 1,400 gold staters each year.

3. To build up stocks of grain, the city auctioned the purchase and import of public grain to 'anyone who so wished' (*ho boulomenos*)—the singular ought to be taken to mean that a single purchaser is envisaged.<sup>86</sup> That individual was then given the entire sum of the grain-fund as an interest-bearing loan payable at the end of the year.<sup>87</sup> The successful candidate, that is, the winner at the public auction, was thus 'the one who so wished' and who outbid competitors by offering to pay the highest rate of interest on the loan. Having imported the grain into the city, he was permitted to sell it 'at whatever time of the year he wishes'.<sup>88</sup> In effect, the city auctioned a 'package' consisting of (a) the sole right to purchase and import grain (i.e. a *statutory* monopoly) and (b) a loan with which to finance the operation (a banking service). In short, *ho boulomenos* was set up in business by the city, which equipped him with a monopoly and with credit.<sup>89</sup>

<sup>84</sup> See e.g. the grain-fund of Samos: *Syll.*<sup>3</sup> 976 (early second century BC), with Thür and Koch 1981, and Migeotte 1990. That of Thuria in Messenia: *IG V* (1) 1379, cf. L. Robert, *BCH* 52 (1928): 426–32. And of Samothrace: Fraser 1960: no. 5. See generally Panessa 1982; Migeotte 1991; Migeotte 1998.

<sup>85</sup> For the royal (primarily Seleukid) impositions on the cities of Asia Minor: Ma 131–3; Capdetrey 2004: esp. 109, with n. 14; Martinez-Sève 2004; Schuler 2004.

<sup>86</sup> Lines 74–76. The expression *eis hypothēkēn* (lines 92, 94) here does not mean 'against security' (*RC* p. 22; Préaux 1954: 316), but is used as a synonym of *parakatathēkē*, i.e. 'deposit': Migeotte 234, with nn. 358–60; Fantasia 1984: 292–302.

<sup>87</sup> In other arrangements of this kind—e.g. the regulations concerning the Samian grain-fund (*Syll.*<sup>3</sup> 976: early second century BC) and in the Samian decree honouring Boulagoras (*IG XII* (6.1) 11, lines 36–45: late second century BC)—the purchase of public grain is the responsibility of *sitōnai*. No uniform description of the Hellenistic *sitōnai* seems possible. Whereas the *sitōnai* of early Hellenistic Athens were public officials (Oliver 2007: 215–22), those of other cities seem to have approximated professional merchants: Fantasia 1984: 303–11, esp. 307. For examples of privately financed purchase of public grain: Bolkestein 1939: 256–7.

<sup>88</sup> Compare with the Athenian grain-tax law of 374/3 BC, which ordains that the public grain collected as the *dōdekate*-tax (eight and one-third per cent) and the *pentēkostē*-tax from the islands of Lemnos, Imbros, and Skyros must not be offered on sale in the marketplace of Athens before the month of Anthesterion (February–March): Stroud 1998: lines 40–4, with pp. 72–3. In *RC* 3: line 75, the seller is not subject to such a restriction.

<sup>89</sup> The arrangement compares favourably with the 'monopolies' of Ptolemaic Egypt, actually *ōnai*, i.e. industries sold by auction to the highest bidder, and which provided the state with revenue: see von Reden (this volume).

In the *Oikonomika*, Pseudo-Aristotle reports an economic stratagem employed by Selymbria, a grain-producing city neighbouring Byzantion. The export of grain (home-grown or otherwise) was generally prohibited by law. But at a time when the city was in need of funds the citizens decreed that all those with stores of grain should deliver them up at the fixed price. Then they farmed out the right to export grain to 'the one who so wished' (*ho boulomenos*), setting a sale price that was advantageous to them.<sup>90</sup> This instance differs from the arrangement in Lebedos in several respects; in particular, it concerns the export, not import, of grain. Yet like that of Lebedos it resulted in the creation of a *statutory* monopoly that eased the holder's way to economic gain, all the while that Selymbrian law continued to bar all others from enrichment by the same means.

4. By what means Lebedos intended to raise the sum of 1,400 gold staters is a matter passed over in silence in our document. One option was to levy a special tax, an *eisphora*; another was to invite individuals to make voluntary contributions of money, *epidoseis*. A third option, which during the Hellenistic period appears to gain so much in importance as to become a serious competitor of the other two, was to borrow the sum needed. A growing body of evidence shows that many cities in need of public revenue tended more and more often to raise funds through loans from individuals, rather than through the more traditional sources of revenue.<sup>91</sup> For example, when Samothrace between 240 and 221 BC needed money for its grain-fund (*eis sitothesian*), the city obtained an interest-free loan from Epinikos, the Ptolemaic governor in charge of Maroneia.<sup>92</sup> A fragmentary decree of Samothrace from the same period, which contained regulations for the purchase and distribution of public grain, mentions the repayment of moneys by the *argyrologoi* to the *sitothetai*. Probably, these latter are not public officials but, like Epinikos, simply moneylenders advancing the sums with which to

<sup>90</sup> [Arist.] *Oec.* 2.17, 1348b 34–5. See van Groningen 1933: 118–20, who takes the phrase *exagōgēn edōkan tōi boulomenōi* to mean the grant of export permit to 'the one who asked' for it: 'permet l'exportation à qui la demande' (p. 119), cf. Bresson 202: 'De ce grain, il donnèrent ensuite license d'exportation à qui en faisait la demande', following Descat 1993: 150. Certainly, this is the correct, direct translation of the phrase, and in any case a special permit was required to export grain. But in contexts such as the present one (cf. *RC* 3/4), just as in a political context, *ho boulomenos* usually means 'the one who wishes from amongst those who may', Hansen 1991: 72. Therefore, the Selymbrians must have granted export permit to one individual from a larger group of those 'who so wished'. That person was probably the winner at an auction. That *ho boulomenos* held a monopoly is also the view of van Groningen 1933: 119.

<sup>91</sup> Migeotte provides the main documentation. See Gabrielsen 2005: 147–8, and esp. Gabrielsen (forthcoming).

<sup>92</sup> Gauthier 1979: 76–89, text at 88–9, esp. lines 32–4: *edaneisen chrēmata atoka eis [sitoth] esian en kairois anagkaiois*, tr. at 81: 'il a prêté de l'argent sans intérêt pour constituer un fonds de blé, dans des circonstances critiques'; Migeotte : no.68 (p. 236), cf. P. Roussel, *BCH* 63 (1939): 137; L. Robert, 'BE' 1939: 298, and L. Robert, *Studia Classica* 16 (1974): 85–9.

establish the grain-fund.<sup>93</sup> It is thus highly likely that Lebedos, too, intended to raise the 1,400 staters for its grain-fund (*parathesis tou sitou*) by contracting a loan that might or might not have been interest-free. A prime reason which Antigonos gives for his dislike of this kind of arrangements, it may be remembered, is that it threw the cities into indebtedness.

I conclude my brief reconstruction of these proceedings by trying to answer a crucial question: who ‘threw the rocks’ and who were ‘the eggs’ in such instances?

To begin with, the private moneylenders who provided the capital for these funds were cashing in a profit in the form of interest; their loans were advanced to the city, which in turn sub-lent the entire amount to *ho boulomenos*. Secondly, *ho boulomenos* was profiting from his *statutory* monopoly of grain-import and grain-sale in the city, a monopoly that was financially backed by a credit extension from the city itself.

If Lebedos, like Selymbria, had a law generally banning the export of grain, then the city would have offered to *ho boulomenos* extra protection from competition, thus enlarging his privilege with the advantages of a *sheltered* monopoly, in addition to the *statutory* one. Moreover, since it was usually people of his description who were honoured with grants of tax-exemption, (cf. the example of Malousios from Gargara in Section 4 above), it can be surmised that in some cases at least his movement of grain was ‘transaction-costs protected’ through grants of *ateleia*; as a result, his profit would grow larger, which might entail a lower sale price. All in all, in this area, one big ‘firm’ only was allowed to exist and also given generous public support to prosper, at the same time as a multiplicity of other, competitor ‘firms’ were effectively prohibited from coming into being. This arrangement compares favourably with a *natural* monopoly, especially the ‘socially beneficial’ version that is advantageous to the purchasers/consumers of vital commodities: absence of competition and decreasing per unit costs (in our ancient example caused mostly by tax cuts) keep prices relatively low (see above p. 221).

Thirdly, as a sub-lender the city itself was harvesting the interest from the loan it had advanced to the monopoly-holder. Its profit consisted of the differential between this rate of interest and the one to be paid to the original moneylenders; and the higher the rate offered by *ho boulomenos* at the

<sup>93</sup> Fraser 1960: no. 5 (from the period of Ptolemaic domination of Thrace), esp. lines 3-5: *καὶ ἀποδιδόναι τὴν τιμ[ὴν] | [τοῦ αἵτου] το<ι>ς σιτοθέταις ἐν τῷ γεγρα[μ] | [μένει χρ]όνωι*, with lines 14–15. Cf. L. Robert, *Gnomon* 35 (1963): 53–7. Fraser (1960: 27–32) likens the *argyrologoi* to public treasurers and the *sitothetai* to other known city officials who were appointed to administer the grain supply (e.g. *hoi epi tou sitou*); so also Gauthier 1979: 87: ‘commissaires au blé comparables aux *sitōnai* d’autres cités, charges de l’achat et de l’acheminement du grain.’ But if we accept the close connection established by L. Robert between *sitothetai* and *sitothesia* (L. Robert, *Studii Classice* 19 [1974]: 85–8), then *sitothetai* most probably describes moneylenders. For that reason, I translate *ἀποδιδόναι* with ‘to repay’ or ‘to reimburse’.

auction, the greater the city's profit. At the same time, the city made it visible to all that it was doing its best to fulfil its obligation to feed the population.

Fourthly, having established a close collaboration between them, all these public and private economic actors were getting richer at the expense of the grand Hellenistic monopoly-holder, the king: (a) importers of public grain were by-passing the king's 'tributary territory' (*phorologoumenē chōra*)—itself a supplier of a vital commodity and a source of tax-revenue; and (b) cities were depriving the king of further tax revenue through resort to arrangements that artificially reduced the amount of the city's taxable revenues (*prosodoi*), that is, a deduction of partly the monies owed to private or public moneylenders, partly the sums set aside as corn-funds (*eis sitou parathesin*).

These methods are somehow reminiscent of those employed by wealthy citizens of Classical Athens, who in order to evade (or to be less disadvantaged by) their obligation to perform liturgies and pay *eisphorai*, artificially minimized their property or turned it into 'invisible' (*aphanēs ousia*).<sup>94</sup>

In Hellenistic times, the methods in question seem to have become part and parcel of the economic responses devised by *poleis* to counter the overwhelming political dominance of the monarchies; their schemes were economic stratagems of the first order. The principles were not new. Antigonos could have said of the Lebedians what the tyrant of Syracuse reportedly did say of the monopolizer of iron-foundries when he threw him out of his city: they were 'inventing means of personal enrichment that were detrimental to the tyrant's own affairs' (Arist. *Pol.* 1259a 23–32). The new thing was that Hellenistic cities, determined to pierce a hole through the massive royal monopolies, tended increasingly to establish profitable partnerships with private individuals, and together to set up their own monopolistic arrangements. Little wonder that Antigonos was not entirely happy with grain-funds.

Provided my reconstruction is correct, two further points emerge. The first is that we should not longer feel obliged to take at face value *all* such instances in which a Hellenistic city justifies the introduction of some measure—or its request for some privilege, or its award of some honour—by referring to an urgent shortage of grain (*sitodeia*, *spanositia*). Indeed, we should even seriously question the still-dominant notion that chronic food crises are a typifying feature of the Hellenistic city.<sup>95</sup> An equally critical stand should also be taken towards those cases in which a city pleads financial exigency and 'civic distress', through the use of such expressions as *stenochōria*, *kairoi dyskoloī*, *kairoi anagkaiotatoi*, *kairoi epeigontes*, and the like.<sup>96</sup> Not all such claims

<sup>94</sup> Gabrielsen 1986.

<sup>95</sup> The standard view: Garnsey 163. Pritchett (1991: 470) is one of the few scholars to express scepticism.

<sup>96</sup> On the word *stenochōria* ('financial distress', 'poverty'), see P. Gauthier 'BE' 1989: no. 277, commenting on Wörle 1988: 422, II, lines 12–13, and referring to further evidence: L. Robert, *OMS* 1: 288 n. 1 (inscriptions) and Polyb. 1.67.1; 31.31.2; *I Macc.* 13.3. On the expressions *kairoi*

reflect reality.<sup>97</sup> My second point derives from a more general observation. Traditionally, the *polis* is known as the birthplace of the assemblyman who proposed decrees and partook in political life under the technical name of *ho boulomenos*—the archetypal figure of *homo politicus*. Antigonos' correspondence, however, shows the Hellenistic *polis* to have bred also another kind of animal. He, too, is described with the technical term of *ho boulomenos*. But this one is a thrifty 'gain-getter', a practitioner of *chrēmastikē* who thus better fits the description of *homo economicus*.

## 6. CONCLUSION

Early modern debates about monopolies and free trade have contributed to making the idea of the incompatibility between the two an article of faith. This seems to be one of the reasons why some ancient historians perceive the state, with its political economy, and the institution of the market as antithetical phenomena, which, as long as they were engaged in an antagonism favouring the state, are said to have kept economic processes atrophied. Another and more important reason is that an ideological construct—as pervasive in our ancient sources as it is admirably coherent—and particularly the marginal position it assigns to trade and traders have been taken for reality. The examples discussed above give a different picture. They show that often representatives of the state entered into synergistic economic relationships with private actors; as a result, the political economy and the free market economy, rather than combating each other, fed on each other. Special attention has been given here to those partnerships which powerholders (cities or kings) and merchants formed around monopolies and monopoly-like arrangements in the Hellenistic period. Besides the familiar monopolies run by states possessing a highly-demanded resource, there existed several types of artificially created monopolies. These latter came into being and were maintained through resort to an *economic stratagem*, which in the case of our partnerships was effectuated with substantial sponsorship from the state. Two notable features of the Hellenistic period are (a) the *emporion-monopōlion* arrangement, and (b) the growth of tax-exemption (*ateleia*) into a significant

*dykoloi, anagkaioi*, etc., see Quass 1993: 182 n. 610. On the finances of the Greek cities: Migeotte 1995, and Migeotte 2002.

<sup>97</sup> Polyb. 5.88.4: 'Rhodian diplomacy enhanced the magnitude and importance of the disaster . . . In this way they made such an impression on the cities, and especially on the kings, that not only did they receive presents beyond measure but they even made the donors feel under obligation to them' (tr. Austin<sup>2</sup>: no.111)—said in connection with Rhodes' receipt of gifts after the earthquake of 227/6 BC: see Gabrielsen 74–8.



instrument of economic leverage, competitiveness, and cost-efficiency. A third one is, of course, the application of such economic stratagems by partnerships formed by city-state governments and private businessmen, and aimed at breaking the huge monopolies (especially in foodstuffs) of the Hellenistic kings. And in these cases, as Antigonos I's correspondence with Teos and Lebedos shows, it was largely on ideology that the partners' stratagem relied in order to force their king knowingly to become 'the eggs', while themselves remaining 'the rocks'.

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# The Economy of Koile-Syria After the Seleukid Conquest: An Archaeological Contribution

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Where historical sources are most often occupied with political events or administrative systems, archaeology can shed light upon patterns of settlement, evidence for activities involving economic investments (such as large-scale building activities), or the ebb and flow in trading activities. This paper will focus on an example of how archaeological evidence is able to show that destruction, economic decline, or even depopulation were not necessarily inevitable for a territory undergoing war and conquest. It could mean continuity, new settlements and added prosperity, including possible direct royal investments after the conquest. The region I want to examine is the territory covered by the modern states of Israel and Jordan, for the period following the conquest of Antiochos III.

In this chapter I shall try to show that on a regional level, when surveys and excavations are combined, archaeology is able not only to contribute to the long term history of a region, but also to its history on quite a short-term basis, in this case the transition from Ptolemaic to Seleukid rule. Furthermore I will argue that there was a marked growth in wealth and possibly in population during the Seleukid reign compared with the period before 200 BC.

## ENVIRONMENT

The intensive excavation and survey activities in Koile-Syria, as this region was normally called (Finkelstejn 2003), have brought to light that the region west of the Jordan River, particularly the coastal zone, was a prosperous area from the beginning of the Hellenistic period. Studies have indicated that the climate



Fig. 12.1. Map of Palestine-Transjordan (with sites mentioned in the text).

was rainier in the Levant than it is today (MacDonald et al. 2004). It is possible that the area was also colder in the period 300–200 BC, a development which continued into the early Roman Empire, peaking around AD 90. In the Byzantine period the climate became more dry and arid, something that was possibly intensified further in the period from c.AD 1400.

The region is characterized by different soil types. The so-called Red Mediterranean soil, which characterizes large parts of the region and is

excellent for growing grapes, olives, and other fruits in the hilly parts (with pine forests in the mountains), and for grain in the flat areas; the Yellow Mediterranean soil along the Jordan-Wadi Araba Depression for cereals (dry farming) and grazing. The Yellow soils of the steppe further east can be used for barley production and/or pasture (Bender 1968, 179–82).

## THE CASE OF PTOLEMAIOS AND HIS PROPERTY: THE HEFZIBAH STELE

Whereas royal activity in Asia Minor after the reconquest of Antiochos III is richly attested in the epigraphic material (e.g. Ma 1999), in Koile-Syria the epigraphic evidence from the years after the conquest is—so far—modest. Only a couple of inscriptions together with royal decrees mentioned by Josephus (*AJ* 12.138–53; see also Aperghis, this volume) have been discovered. This, I think, should not be indicative of the way that the practice of setting up royal decrees and letters on stone stelai, visible for everybody, was rare in Koile-Syria as has been assumed by Finkelstein (2003), who suggests that such inscriptions were not put up in non-Greek, marginal areas. The inscription on a stele set up in front of the main temple in the Hellenistic sanctuary of Failaka in the Persian Gulf, for example, clearly contradicts such a supposition (Piejko 1988; Jeppesen 1989; Sherwin-White and Kuhrt 1993; Hannestad 1994).

The Hefzibah stele<sup>1</sup> was found at a site in the fertile landscape about 7km north-west of Skythopolis, which has produced archaeological evidence from the Persian and Hellenistic periods. The stele indicates that Hefzibah was the site where one of the villages mentioned in the inscription was located, thus identifying the area where Ptolemaios probably had a large part of his estates. Despite its fragmentary state, it offers us an interesting insight into Antiochos' handling of a case that corresponds to Bikerman's 'surrender and grant' model, though here concerning a private person, not a city (Bikerman 1938: 133–41; see also Ma 1999: 111–12). Ptolemaios is probably to be identified with the Ptolemaic *strategos* mentioned by Polybios as son of Thraseas (Polyb. 5.65.3) and with the Ptolemaios to whom a letter from Antiochos III was addressed, as mentioned by Josephus (*AJ* 12.138–44). The complicated inscription includes eight (Robert and Robert 1970) or nine (Fischer 1979) letters altogether. (A) a letter from the king to Ptolemaios; (B) an almost completely destroyed royal letter to Kleon; (C) a letter from the king to Kleon with Ptolemaios' petition attached: in this letter the king commands that the petition of Ptolemaios shall be accepted; (D) the attached complaint from

<sup>1</sup> SEG XXIX 1613; Landau 1966; Robert and Robert 1970; Fischer 1979; Bertrand 1982.



Ptolemaios; (E) another royal letter to Kleon, again with a complaint from Ptolemaios attached, and the command that what Ptolemaios wishes shall be granted; (F) the renewed petition of Ptolemaios attached to E, in which he asks to be exempted from billeting of soldiers and complains that draft animals and people are stolen from the villages belonging to him; (G) a royal letter to Marsyas who is told to see to it that soldiers respect the royal decree and that those who do not are punished tenfold; and finally (H and I) two royal letters each to several men with Greek names (Fischer suggests these are commanders; see also Aperghis, this volume). The correspondence takes place in 199/198(?) and 196/195(?) according to the various dates given. In other words, Ptolemaios asks for the first privileges not later than the earliest date mentioned, and the king sees to his second request not later than 195. Ptolemaios had apparently inherited or been given land, with villages, by the Ptolemaic king, and was allowed to keep this land when he changed sides. What clearly emerges from the inscription is that in the first years after the Seleukid conquest of the area, the Seleukid soldiers were a heavy burden on the region of Skythopolis, and undoubtedly also on other areas of Koile-Syria. These were the years (after the final conquest of Gaza) when Antiochos III marched against the Ptolemaic possessions in Asia Minor. A substantial standing army was left in Koile-Syria, which needed to be billeted and fed. There is little evidence for destruction at most sites, but even then these soldiers must have been a burden on the region.

Though the correspondence in the stele concerns a single high ranking individual, and may say more about the agreement between the king and Ptolemaios, it may also reflect the situation at a more general level. A region or a city directly involved in war, or which was simply situated in a war zone, had to carry a heavy burden with the billeting of soldiers. It also ran the risk of being looted by the soldiers securing their own provisions, in shorter periods often probably down to the point of starvation for the civilian population (see also Chaniotis 2005: 124–9). That Antiochos took care to lessen such burdens, at least in some cases—probably when the king wanted to secure the support of a city, or of private individuals, or with an eye to future taxations—is also attested by the well-known letter to Sardeis (Gauthier 1989; Ma 1999: 284 no. 1; *SEG* XXXIX, 1283).

## CONTINUITY AND CHANGE IN SETTLEMENT PATTERNS

If we switch our focus to an analysis of the economic development of Palestine and Jordan during Ptolemaic and Seleukid times, based on the evidence from surveys and excavations, we are presented with a very different picture.

## Galilee

In Upper Galilee two surveys have been carried out. One (begun in 1975), encompassing more than 300km<sup>2</sup>, and another (1986–90) from the Mediterranean along the Lebanese border, and to the south, to the road connecting Acco and Matulla (Frankel and Getzov 1997; Frankel et al. 2001). From the Persian period, when the area was part of the Fifth Persian satrapy, eighty-two sites have been located, mainly in the coastal plain. From the Hellenistic period, 106 sites have been recorded, showing a net increase in the number of sites by 29 per cent. Fifty-one of the Hellenistic sites continued occupation from the Persian period and fifty-five were new. The typical diagnostic sherds of the Hellenistic period are Rhodian amphora stamps of the third and second centuries BC.<sup>2</sup> The progressive rise in the number of sites continued into the Roman period, when 170 sites are recorded.

Among recently excavated sites in the area is *Kedesh*, 10 km north-west of Hazor, in one of the most fertile parts of modern Israel. A large building complex (56×40m) probably functioned as a palace (Herbert and Berlin 2003), like similar buildings at for instance Lachish, Dura, and Nippur. The palace had a predecessor in the Persian period, building materials from which were reused for the Hellenistic palace. The western part of the palace was probably the part used for official functions. Two rooms excavated in the north-west corner clearly functioned as an archive. In one of them were found 2,043 clay sealings and the impressions could be identified in 1765 cases. Three-quarters of these derive from Greek mythological iconography (eg. Aphrodite or Apollo, portrait busts and various objects). Only twenty-two of the sealings (representing twelve types) bear inscriptions, nine types in Greek, five in Phoenician and two are bilingual. These sealings—probably together with seven bearing an anchor (a typical Seleukid symbol, and some bearing royal portraits (Herbert and Berlin consider twenty-two to have Seleukid portraits ranging from Antiochos II to Demetrios I)—are the only sealings which may have had an official status. The majority actually seem to have been private. Herbert and Berlin interpret the site as an administrative centre continuing from the Persian through the Hellenistic period.

Three distinct assemblages of pottery were found in the sequence of super-imposed floors. The earliest phase, consisting of wall foundations, belongs to the Persian period. The second is identified by the excavators as belonging to the period when the archive was in use and is considered to begin with the Seleukid conquest. The last phase is also Hellenistic and is characterized by the use of ESA pottery. Herbert and Berlin suggest that this last phase belongs to a

<sup>2</sup> Possibly twenty-five further sites may be Hellenistic, but here only the so-called Galilean Coarse Ware, which was also common in the Persian period, has been found. There is no other diagnostic material.

reoccupation of the building in the later part of the second century BC. There are few Ptolemaic coins, compared to the number of Seleukid examples, and the number of Rhodian amphora stamps dating from the third century is also quite small. Kedesh, however, is mentioned in the Zenon papyri, and there was probably also an administrative centre here during the Ptolemaic period, though so far it is not clear from the excavation report whether this also belonged to the earlier, so-called Persian, phase of the building.

Kedesh was probably part of the territory of Tyre. Some of the sealings refer to this city and to Sidon (Ariel and Naveh 2003), and the majority of coins found on the site were minted in Tyre (Herbert and Berlin 2003: Table I). The nature of the administration is discussed by Herbert and Berlin, who conclude that Kedesh was the residence of the governor of the eparchy of Galilee, or of the *stratēgos* of Koile-Syria and Phoenicia; both suggestions must for the present remain highly speculative, not least since so few of the sealings apparently have an official nature.

An example of a different type of settlement in the mountainous parts of Galilee is the village situated at *Tell Anafa*, near the point where the east–west road from Damascus to Tyre crossed the north–south road through the Jordan and Massyas valleys (Herbert et al. 1994).<sup>3</sup> In the late Hellenistic period the settlement may have been a town rather than a village, probably within the orbit of a Phoenician coastal city (Herbert et al. 1994: 1–2). The mound goes back to the Bronze Age, but the best preserved remains are from the late Hellenistic period. In that period the mound served as the acropolis of a settlement surrounded by walls. The excavations have revealed few architectural remains from the Hellenistic period earlier than the late third or early fourth quarter of the second century BC, when a luxurious villa was constructed over the north central section of the tell. The site, however, has yielded a large number of finds covering the whole of the Hellenistic period, including numerous coins (Meshorer 1994), and stamped amphora handles (Ariel and Finkielsztejn 1994), large quantities of pottery, and thousands of cast glass bowls. Among these finds the late Hellenistic period is much better represented than the early Hellenistic. Thus, Meshorer (1994) notes that not a single Ptolemaic coin of the period after Ptolemy II has been found, and that there is a total break of about twenty years between these and the subsequent Seleukid coinages. Seleukid coins by contrast are common, and particularly so in the second half of the second century, that is, the period of the villa. Most of them derive from the Seleukid mints at Sidon and Tyre. In the last phase when these cities were free to mint their own coins, coins from other Seleukid mints, in particular Antioch, also reached Tell Anafa. Altogether Tell Anafa offers a good picture of a settlement in northern Palestine in the late Seleukid period;

<sup>3</sup> The ancient name of the site is not (yet) known.

a small, but rich town, which seems to have been abandoned shortly after 75 BC. In contrast to the prosperity of the late Seleukid period, there was only a much more modest settlement on the site in the Ptolemaic period.

On the coast of Galilee, *Acco*, which was an important city already in the Persian period (and earlier), was refounded by the Ptolemies as a Greek *polis* (Ake) Ptolemais. After the Seleukid conquest it was briefly known as Antiocheia Ptolemais. It is a typical example of how little destruction and how much continuity the cities in the coastal area of Palestine experienced with the change from Ptolemaic to Seleukid rule. Excavations from 1974 onwards have revealed a city plan from the early Hellenistic/Ptolemaic period, which continued to function under Seleukid occupation. A rare example of destruction, which can probably be connected with one of the last Syrian wars, was revealed in section E, where a stratum dating from the end of the third or the beginning of the second century BC includes a plastered floor covered with fallen debris, c.100 arrow heads, and lead sling bullets. Pottery found on the floor suggests a date in the last quarter of the third, or the early second century BC. A catapult stone found on the floor was therefore interpreted by the excavators as having been hurled during one of the battles of the Syrian wars. The arrow heads and sling bullets are seen as indications that the structure may have been a storehouse for weapons.

The wealth of the city and its importance as a trading centre for imported Rhodian wine in the Seleukid period is clearly witnessed even in small trial trenches from the rescue excavations during the 1990s. As Finkielsztein (2000: 13) reports, the following amphora stamps were found: 13 Rhodian (the majority dating from the second century, a few from the first century); 1 Knidian (possibly end of third/beginning of second century); 5 Koan; and 1 unidentified stamp. Another plot yielded 33 Rhodian (covering the period from the last quarter of the third to the late second century, the majority from the first half of the second century); 1 Knidian (second century); 1 Koan; 1 Thasian (fourth to third century BC) and 1 unidentified. A Greek inscription on a marble slab (once mounted on a wall), was found in 1959, in connection with what seem to be the remains of a small Hellenistic temple. According to the inscription, the temple was dedicated to Zeus Soter, in honour of Antiochos VII Sidetes (?), by the chief secretary (*grammateus*) of the Seleukid army and governor of the district in 130–129 BC (Landau 1961).<sup>4</sup>

At *Shiqmona*, on the coast of lower Galilee near Cape Carmel, remains of what may have been a Hellenistic fortress have been excavated. The building, which was destroyed c.130 BC, includes a courtyard and three large store rooms full of amphorae. Among these a locally produced amphora has stamps

<sup>4</sup> Interestingly the royal names and some of the titles were later deleted, partly by a sharp instrument and partly by adding some (Greek) letters.

on the handles recording the *agoranomos* and the year 180 of the Seleukid era (132 BC: Elgavish 1972).

Twenty years of excavation at Dor (Stern 1995)<sup>5</sup> on the coast of lower Galilee (or Sharon), known in Greek and Roman sources as Dora, have revealed significant parts of the Hellenistic city, with clear evidence of continuity from the Ptolemaic into the Seleukid period. Thus Stern (1995: 278) concludes that the city continued to exist with very few changes from the Ptolemaic phase. There is no evidence for destruction or disturbances (Stern 1995, 43), though a new phase can be detected by additions and repairs. This Seleukid phase seems to have come to an end around 125 BC. During the excavation campaign of 2000 the first Hellenistic mosaic in *opus vermiculatum* recorded in the region was found, unfortunately not *in situ*, but in fragments in a pit dating from the Roman period (Stewart and Martin 2003). The motifs on the mosaic include opulent garlands with theatre masks and meander in perspective. Parallels from Pergamon, Delos, and Pompeii suggest that the mosaic dates from the middle or second half of the second century, and decorated a floor in a wealthy house from the Seleukid period.<sup>6</sup> A survey carried out around Dor (Gibson et al. 1999) clearly indicates the presence of farmsteads/villages, particularly from the second century onwards.

At *Sha'ar ha-'Amaqim* in lower Galilee, near Mount Carmel, a Hellenistic town, possibly to be identified as Gaba, has been partially excavated. Of the coins found on the site, most are Seleukid, starting from the reign of Antiochos III and ending with Antiochos VIII (125–113 BC). They were minted in Antioch, Sidon, Tyre, and Acco. There is, however, pottery evidence dating back to the Persian period. The most significant building was an almost square, ashlar-built tower, which can probably be interpreted as a control unit built after the Seleukid conquest, as part of the intensive building activity to reinforce Seleukid territorial gains. Among the architectural fragments found are fragments of a Corinthian capital and a pseudo-Doric capital, both to be dated in the second or the first century BC, clearly suggesting a building of some wealth.

## Samaria

In western Samaria (see Dar 1986 and 1993 for surveys carried out through the period 1971–81), the transition from the Persian to the Hellenistic period

<sup>5</sup> The site was inhabited continuously from the middle Bronze Age.

<sup>6</sup> Parts of columns, including Doric capitals and an Ionic anta capital, plus a Nike sculpture, have also been found, and suggest a temple or propylon, the dating of which may be related either to the Ptolemaic victory at Raphia, or to the Seleukid conquest (see Stewart and Martin 2003).

involved no destruction and probably no substantial change in the settlement pattern (Magen 1993*b*). It seems that in this period, probably under the Seleukids, there was a substantial expansion of agricultural settlements in this part of Samaria, mainly consisting of small villages and a large number of farmsteads. This is reflected in the construction of terraces, clearing of stones, construction of roads, water reservoirs, and wine and oil presses. A number of sites are clearly farms, others larger agricultural settlements or villages. A network of rural roads dating from this period was also detected. A characteristic element in many farmsteads is a tower, probably not used for fortification purposes, but associated with wine-making (Dar 1986: 109ff). The main crops were wine and olives, as attested by the many presses for both purposes (Dar 1986, chs. 6 and 7). An example of such an agricultural settlement has recently been uncovered in the area of Mazor on the western slope of the Samaritan hills, near the coastal plain. So far three different sections of the settlement have been excavated. One, a square complex with an interior courtyard, clearly functioned for domestic purposes, whereas another was used for production and storage. More than twenty rooms of varying size were arranged around an open courtyard. Among them are storerooms with plastered floors and walls, and central sumps where liquids and possibly grain were stored. Other rooms contained two olive presses. Finds of coins, pottery, and Rhodian stamped amphora handles indicate that the farmstead was established in the beginning of the second century BC, confirming the hypothesis that the area experienced a strong growth in agriculture after the Seleukid conquest. The settlement was destroyed towards the end of the same century (Wolf 1996: 750–1). Among the small finds in the production area are two silver drinking sets (each consisting of a shallow bowl, a ladle, and a jug), the first examples to be found in Israel, testimony to the prosperity of a modest agrarian settlement.

A survey carried out in the 1980s in the southern Samaritan Hills, over an area of 1,050km<sup>2</sup>, in conditions that were harsh for settlement, revealed that this area witnessed a sharp decline in the number of settlements in the Persian period (here there were ninety sites, mostly of the early period compared to 190 from Iron Age II). This decline has been explained by the Persian destruction of the kingdoms of Israel and Judah. The number rises in the Hellenistic period, and from the Roman period c.215 settlements have been recorded (see Finkelstein 1993).

The capital of the region, the city of *Samaria*, had been the seat of a Persian governor. This political situation may be the reason why a survey of the northern hills of Samaria (Zertal 1990 and 1993) presents a different picture from that of western and southern Samaria. Here the Persian period presents a peak in the number of settlements—which has been connected with a settling of the returnees from Babylonia—and a drastic fall in the Hellenistic period (connected by Zertal with the Samaritan revolt against Alexander (Curtius Rufus 4.8.9–11).

In the Hellenistic period the older walls of the acropolis of Samaria were reinforced by a number of round towers, possibly already by the end of the fourth century, the period in which the city wall was probably also built. The only result of the Seleukid conquest in terms of building activity seems to have been a very heavy wall (4.2m at its base), built around the upper city, and encompassing 230×120m, strengthened with square towers (Avigad 1993). The city was destroyed in 108 BC by John Hyrcanus.

Though Samaria was the capital, according to Josephus (*AJ* 12.340ff.) *Shechem* was the most important city in Samaria, reaching back to the Bronze Age. Extensive excavations have revealed that after a period of decline and abandonment, the city began to flourish again in the early Hellenistic period under the Ptolemies. The change to Seleukid rule is reflected in the change of coins. In strata IV and III all coins are Ptolemaic, whereas in stratum II Seleukid coins dominate.<sup>7</sup> The city was also destroyed by John Hyrcanus (Campbell 1993).

Excavations between 1983 and 1990 (Magen 1993a) on *Mount Gerizim*, south of *Schechem*, uncovered a city of about 100 acres on the upper ridge of the mountain, built in the Hellenistic period below the old Samaritan sanctuary. A wall strengthened by towers and a fortress protected the more accessible southern slope. The city was divided into four residential areas, three within the city wall and a large quarter apparently beyond it. The finds, especially the coins, strongly suggest that the city was established during the time of Antiochos III, and destroyed by John Hyrcanus (114–111 BC).

The precinct on the summit of the mountain covered no less than 5 acres, and was enclosed by a wall with access from the west by means of a 10m-wide staircase, and with two large gates on the eastern side. Finds indicate that the sanctuary flourished in Hellenistic times, and it was probably this sanctuary which, in their petition to Antiochos IV, the Samaritans suggested that they would call the sanctuary of Zeus Hellenios (Joseph. *AJ*.12.257–264) or Zeus Xenios (2 Macc. 2.6.2).

## Judaea

As to *Jerusalem*, the rich literary evidence concerning the city under Seleukid rule (see Aperghis, this volume) so far cannot be matched by archaeology, despite the many years of excavations. Traditionally, and probably correctly, the real growth of Jerusalem in the period after the eighth and seventh centuries, and to some extent the period of Nehemiah (445 BC), has been

<sup>7</sup> For the coins, including two hoards of Ptolemaic silver coins (one of them no earlier than 193 BC), see Sellers 1962.

connected with the Hasmonean dynasty. There is no archaeological evidence of extensive destructions in connection with the Seleukid takeover of the city, in contradiction to the testimonies of 1 Macc. 1:1–3, or the milder version in Josephus (*AJ* 12.252). According to Josephus (*AJ* 12.138–44), Antiochos III sent a letter to his governor Ptolemaios, after his conquest of Koile-Syria, stating the rewards that should be granted to the Jews for supporting the king in various ways when the Ptolemaic garrison was defeated (see Aperghis, 328–9 for translation of the decree; Aperghis this volume). The letter clearly shows that the building of the second Temple was still under construction during the Ptolemaic period and that Antiochos made it economically possible to continue and even extend the building programme. The main part of the city was still concentrated in the area called the City of David (Fig. 12.2). In recent years, however, archaeological excavations have shown that the south-western hill, which was evidently uninhabited in the Persian and early Hellenistic periods, began to develop into an un-walled residential area in the period immediately preceding the Hasmonean revolt. This is attested by finds such as stamped Rhodian amphora handles.<sup>8</sup> It was however not until the middle of the second century (possibly the early Hasmonean period) that this area became densely populated and walled in.

A much discussed problem is the location of the so-called Akra, the ‘fortress’ built by Antiochos IV in 168 BC, to keep strict control of the Temple Mount and the Temple itself (1 Macc. 1: 30–6; Joseph. *AJ* 12.252).<sup>9</sup> Akra was destroyed in 141 during the Hasmonaean revolt. A Greek inscription, discovered by chance ‘in the vicinity of the Old City’, which may report an oath taken by soldiers stationed at the Akra, and associated with the gymnasium, is the only archaeological evidence that may illuminate the problem. The three letters *AKP* may, however, be open to other interpretations (*SEG* xxx 1695). The fortress may have been located in the so-called Ophel area, but many scholars have also considered it to be located on the Temple Mount itself.

Finds of Rhodian amphora stamps from the area of the City of David show a significant peak in the first quarter of the second century (Ariel and Strikovsky 1990). These may well have provisioned the Seleukid garrison, but also reflect the growing prosperity of the city, which made such imports possible. The Hasmonean wall enclosed the City of David, as also the south-western hill. Recent studies seem to indicate that what the Hasmonaean wall was to re-establish or restore the wall of David and Solomon, in other words the wall dating to the end of the First Temple period (Josephus’ First wall,

<sup>8</sup> See *NEAEHL* 2.724 and Ariel 2000. However, Israeli archaeologists are of different opinions as to the dating of important architectural elements found here (for a summary of this discussion: Geva 2000–6: 2.527–8). One of the assumptions has been that some fine architectural elements derive from the temple which Antiochos IV built to Zeus Olympios (cf. 2 Maccabees 6: 1–3).

<sup>9</sup> For a brief presentation of the various suggestions of the location of the Akra see *NEAEHL* 2.723. See also Cohen 2006: 255–63 for a discussion of the location and nature of Akra.



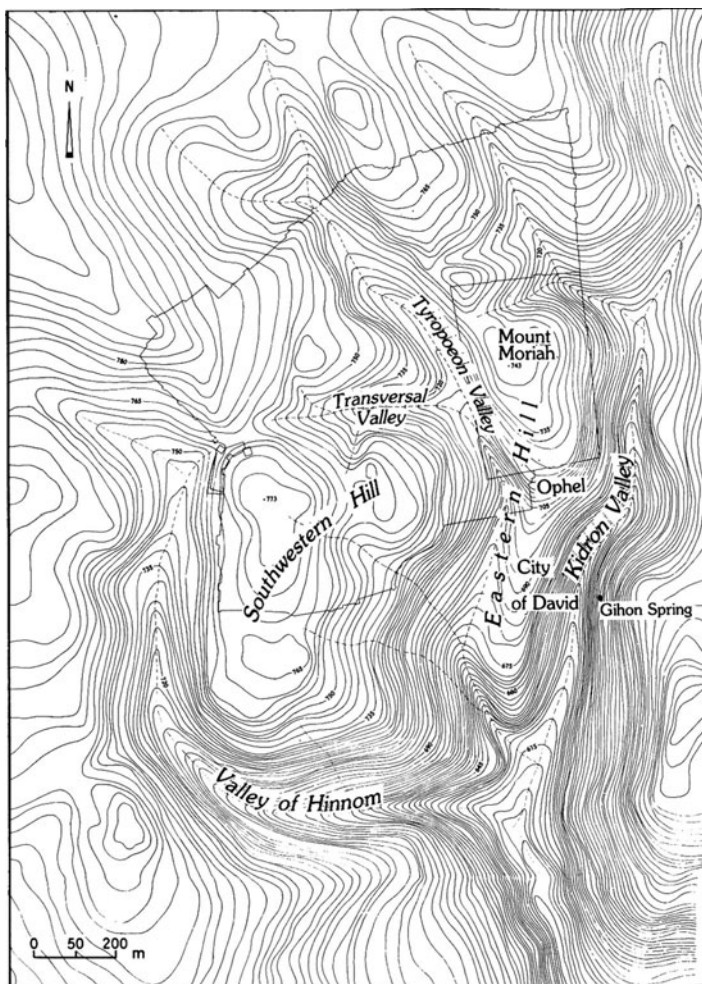


Fig. 12.2. Topographical map of Jerusalem.

*BJ* 5.142–5; see Geva 1993). Extensive parts of this wall and its towers have been excavated. A large number of arrow-heads and ballista stones found in an area of the south-western hill, and attributed to the siege by Antiochos VII Sidetes in 134–132, attest that at this time the hill must already have been surrounded by a wall. It seems probable that the whole Hasmonean wall was actually built immediately after 141 and finished by the time of the siege.<sup>10</sup>

The coins found in various parts of Jerusalem show the pattern that can also be observed at many other sites, namely a significantly larger number of Seleukid

<sup>10</sup> For a brief description of the wall and its three main phases, see Geva 1993.

over Ptolemaic coins (Gitler 2003: Tables 22.1 and 22.2). In Jerusalem, however, the number of Hasmonean coins is significantly higher than Seleukid ones, the majority from the time of Alexander Jannaeus (Gitler 2003: Tables 22.1–3). This pattern is not to be seen in Palestine outside Judaea.

The ecology of the Judaeian Hills made them only marginally attractive for settlement. Surveys have revealed strong changes in the settlement pattern, both in the prehistoric and historic periods. There was considerable growth in the number and especially in the size of settlements in the Hellenistic period. The lack of published material from the surveys prevents any attempt at dating the start of this growth more precisely (Ofer 1993).

About 30 kilometres south of Jerusalem, on the boundary between Judaea and Idumea, *Beth-Zur*, a stronghold already in the middle Bronze Age but sparsely populated in the Persian period, assumed new importance in the Hellenistic period. The stratigraphic evidence shows three different phases of the citadel, but the exact dates of these remain debated, and, as so often in Israel, archaeologists have looked for specific historical events with which to connect them. Taking into consideration the coin finds (see below) it seems probable that the first phase is Ptolemaic, whereas the second and possibly also the third may belong to the time of Antiochos IV.<sup>11</sup> Around the citadel a prosperous town grew up, or expanded. The excavators have attempted to identify the purpose of the town's buildings. However, in many cases they must be considered highly speculative (cf. Arav 1989: 70). The Hellenistic coins reflect the picture of a settlement reaching its peak during the Seleukid period: fifty-six Ptolemaic (312–181), 180 Seleukid (225–96 BC), and twenty Hasmonean (125–78 BC). Of the Ptolemaic coins, thirty-five can be attributed to Ptolemy II (285–247) and of the Seleukid, 131 to Antiochos IV. This evidently reflects the level of activity at the settlement during his reign (Sellers 1962). The habitation came to an end around 100 BC (Funk 1993; Sellers 1933; Sellers et al. 1968).

In *Ashkelon* on the coast there is evidence of violent destruction of the city in the early third century, but nothing indicates any destruction in the wake of the Seleukid conquest or the preceding wars. Here, as at Dor, further north along the coast, the Hellenistic period, particularly the second century, was a time of prosperity.<sup>12</sup> Excavations have brought to light private houses, their walls decorated with painted plaster in white, red and yellow panels in a fairly simple scheme of decoration, compared to the rich houses further up the coast at Dor. That the city was an important international harbour in Seleukid times

<sup>11</sup> The most recent attempt by one of the excavators to date the phases of the citadel is by Funk 1993, who suggests that the first phase belongs to the Ptolemies, the second to the time of Judas Maccabeus (165–163) and the third to the Seleukid general Bacchides (c.161). See also Sellers et al. 1968: 17.

<sup>12</sup> On the southern tell, Grid 38 phase 9, covering the period from the early third until the mid-second century. So far only two of the planned ten volumes of publication of the results of the Leon Levy Expedition have been published, both in 2008.

is possibly attested by a unusual late Hellenistic coin hoard (Gitler and Kahanov 2008) found under a floor in one of the houses (forty-five bronze coins and one silver) together with twelve additional coins found in the same layer. By far the largest number of coins derive from mints in western Asia Minor; a single specimen from Tyre, three Seleukid, covering the period from Antiochos Hierax to Antiochos VII, and one Ptolemaic from the mint at Paphos and dating from the end of the second century. This picture contrasts strongly with most coin finds in modern Israel, and it is suggested by Gitler that the hoard belonged to a sailor. A regional survey around Ashkelon (Allen 2008), on the coast 16km north of Gaza, shows uninterrupted growth in the number of sites from Iron Age II through the Persian, Hellenistic, and Roman periods, with a culmination in the Byzantine period.

### Idumea

This southernmost region of Israel was clearly of great importance in Ptolemaic times. Vital routes to the north and east crossed the region, such as the one from Egypt via Gaza to the Dead Sea for bitumen (cf. Diod. 19.100.1–3), asphalt, and balsam. Marisa/Maresha, between the Dead Sea and Askalon, was an important centre. At the time of the first excavations in the beginning of the twentieth century, the layout of the city was very well preserved, and has since come to be seen as the typical Hellenistic city plan in Israel with an orthogonal street grid (Fig. 12.3). The city plan results from a Ptolemaic revival on a much earlier site. Here, as at many other sites in Israel, there are no indications of destruction connected with the Seleukid conquest (Kloner 2003), apart from some changes in the street grid, which may in fact actually belong to the Hasmonean period. The city on the mound was surrounded by a lower city, also partly walled, which included a large number of subterranean complexes. According to the inscriptions found, Greek seems to have been the predominant language in the city, but Aramaic and Hebrew are also attested. Many names are Semitic. Of particular interest in connection with the population of the city are some impressive tomb complexes. Tomb I (Peters and Thiersch 1905) with its impressive wall paintings, presents an epitaph to one Apollophanes, which states that for thirty-three years he was chief *arzas* (priest) of the Sidonians at Marisa. The dates given in this tomb follow the Seleukid era (from 196 to 119), as does an Aramaic ostrakon found in 1993 (Wolf 1996: 751f.), which is the earliest marriage contract so far found in Israel.

Finds in the lower city indicate that olive oil production was an important part of the economy of the city, as well as dove breeding in columbaria in the subterranean caves. This specialty is attested mainly in the third century. The caves were also used for storing grain. That the city remained an important

centre after the Seleukid conquest is attested by the abundance of finds dating from the second century BC. The Rhodian amphora stamps cover the period from the beginning of the third century to the end of the second century. The large number of Greek-style terracottas shows a new taste emerging (Ehrlich and Kloner 2008).

Many sites of earlier periods in Idumea seem to have functioned as fortresses protecting important routes during the Hellenistic period. An example is the Iron Age fortress at Horvat Uza, which was reoccupied when a smaller fortress was established again in the Seleukid period (Fig. 12.4). The rich finds ceramics date from the second century BC. Later the fortress was—as many others—reused in Roman times as part of the Limes.

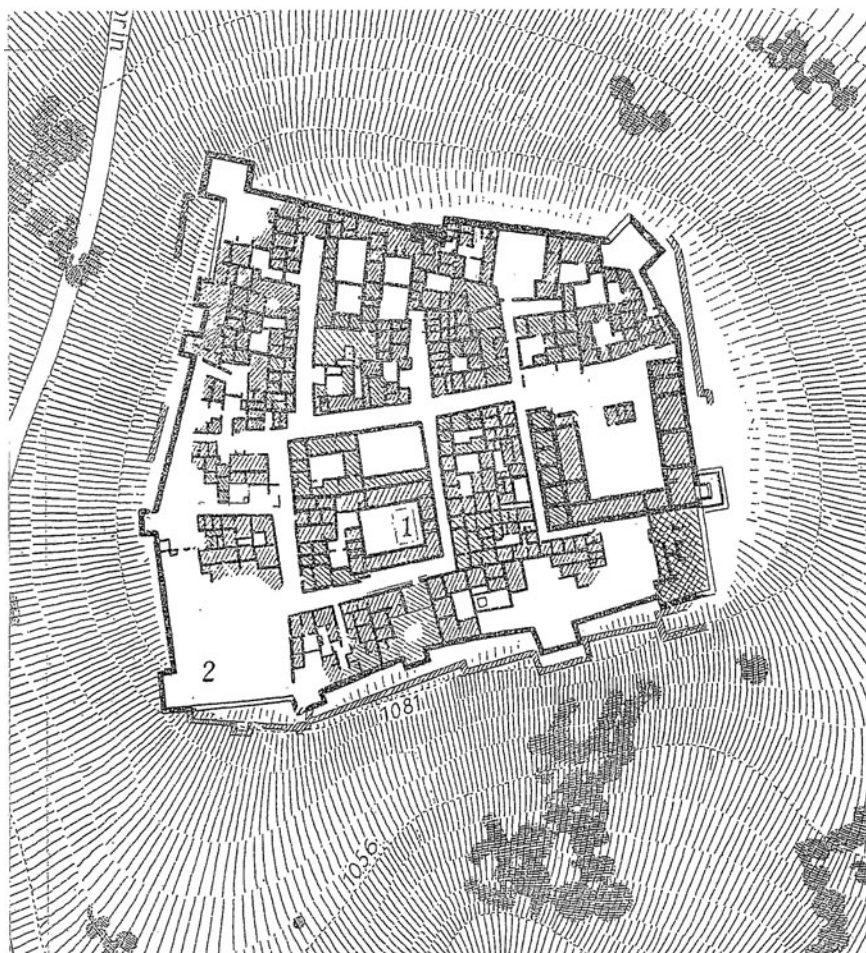


Fig. 12.3. Plan of Hellenistic Marisa (Tell Sandahannah) (from AA 1908, 394).

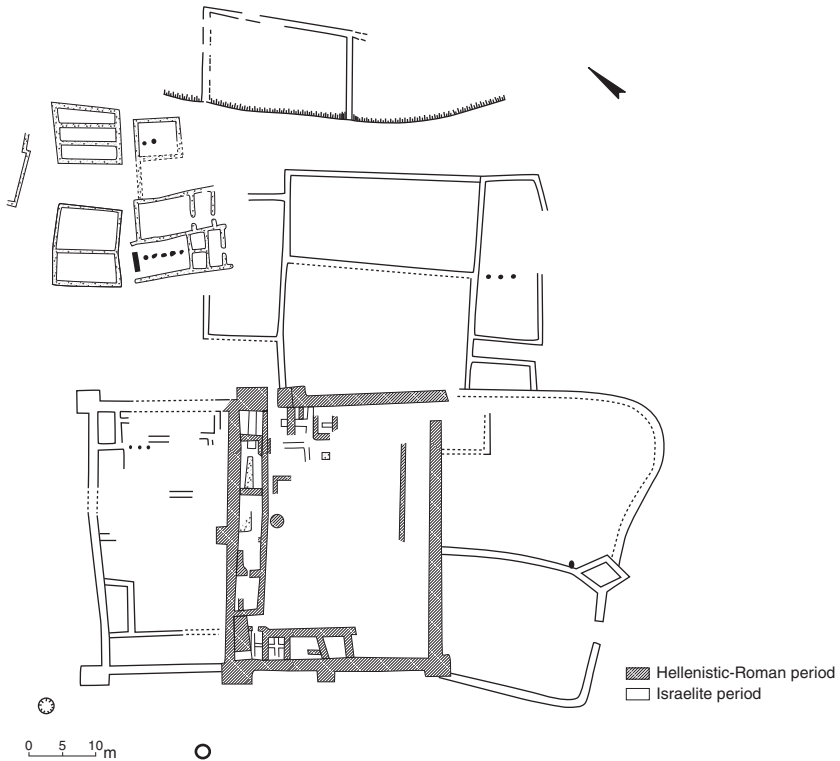


Fig. 12.4. Horvat Uza (from *ESI* 2, 1983, 104).

To summarize, there is clear evidence of growth in the number of settlements in the more fertile parts of the hills (in Galilee, in Samaria, and also in the more marginal Judaean Hills). Particularly in the north there was a steep rise in prosperity from the beginning of the second century, reflected not only in the number of settlements but also by the pattern of coins which can be seen at almost all sites, with a much larger number of Seleukid over Ptolemaic coins, and the large quantities of imported Rhodian amphorae. It is also worth noting that there are very few signs of destruction during the changeover between Ptolemaic and Seleukid rule; on the contrary, there is evidence of enhanced wealth in the coastal cities.

## Jordan

The settlement pattern of Jordan in the Hellenistic period is emerging quite rapidly due to a large number of surveys in recent years. The surveys seem to

offer a very varied picture and many results are still preliminary or remain unpublished.<sup>13</sup> What has so far been published suggests an overall picture of slow growth in the overall number of sites during the Hellenistic period. Only from the first century BC (the Nabatean period), do we witness very strong growth, which in most areas seem to culminate in the Byzantine age (cf. Alcock 1994). The general tendency seems to be that marginal agricultural areas were not yet resettled in Hellenistic times, unless there were specific raw materials to be exploited. The north-eastern part of the region, including the cities of the Dekapolis, was clearly exceptional. Most of these were located on the slopes of mountains and hills east of the Jordan valley (sometimes called the western highlands of Jordan).

## Golan

Surveys and excavations have revealed that with few exceptions this area east of the Jordan, extending from the Yarmuk River in the south to Mount Hermon in the north, was not settled in the Babylonian, Persian, or early Hellenistic periods (sixth–third centuries BC.). This is particularly clear in central and northern Golan. In contrast, after the Seleukid conquest, and until the Byzantine period, there is extensive growth of settlements: from seventy-eight sites in the second century BC to 108 in the first century AD and at least 173 in the sixth century. The agricultural basis for the steep rise in settlements was olive and vine growing. The earliest Hellenistic settlements dating from the second century belong mainly in southern Golan, the more fertile part of the region. It is striking that it was only under Seleukid rule that this area began to flourish again. The settlements were mainly agricultural villages, but the survey has also revealed a series of fortresses which commanded the highways, while towers commanded ascents and secondary roads (Ma'oz 1993).<sup>14</sup> Excavations at *Bethsaida*, north of the Sea of Galilee, on the east side of the Jordan River (Arav and Freund 1995), offer us an insight into the life in the Hellenistic period in a small town which probably had its income both through agriculture and fishing. The coins show a picture similar to what is attested at many sites in Israel: eleven Ptolemaic coins (all from the time of Ptolemaios II (285–246), two minted in Alexandria and three in Tyre) compared with twenty-one from Seleukid times (five of Antiochos III, one

<sup>13</sup> A very useful overview of archaeological activities, including surveys, can be found in the as yet unpublished thesis by J. Tidmarsh on the Hellenistic pottery from Pella.

<sup>14</sup> Such fortresses were Antiocheia-Hippeia (Sussita), Seleukeia (Qusbiyye el-Jdeideh) and the Gorge of Antiochos (Mezad 'Ateret), probably all built by Antiochos IV and Seleukos IV (187–163 BC). Gamala was added towards the end of the second century (see Joseph. *AJ* 13: 394).

Antiochos IV; the remainder of Demetrios II). Fifteen of the twenty-one were minted in Antioch. The town continued its existence in Hasmonean (and Roman) times, but the number of Hasmonean coins found is much smaller than the Seleukid.

### **South of the Yarmuk River**

A large-scale survey was conducted in the 1960s (Mittmann 1970) between the Yarmuk River in the north, the Zarqu River in the south and as far east as Marfaq. 346 sites were recorded, none of which had material dating from the Persian period and few from the Hellenistic period, when compared with the Roman and Byzantine. More recent surveys in smaller areas of northern Jordan confirm this pattern. Thus in the Wadi al-Arab survey of 1983, only 6–8 out of 102 sites recorded in an intensive survey covering  $c.25\text{km}^2$  (Hanbury-Tenison et al. 1984: 394 and 398–403) contain Hellenistic material. In the Southern Hauran survey (Kennedy and Freeman 1995) encompassing both the fertile land on the border of modern Syria, and a southern part where the landscape is strewn with black basalt boulders and at present mostly used by nomads, the field work suggests two peaks in the settlement history, one in the Bronze Age, and the other from the latest Hellenistic/Nabataean period, continuing through the Umayyad. By contrast, remains from the Hellenistic period are scarce.

### **Central and southern Jordan**

In central Jordan, a survey of the hinterland in connection with the Madaba Plains Project suggests a very similar picture, with a growth in the number of settlements beginning in early Roman times and peaking in the Byzantine period. An exception seems to be the region south of Amman, with numerous fortified farmsteads belonging to the Persian, and to some extent also the Hellenistic period, in the hilly region around Tell al-‘Umairi, south of Amman (Herr et al. 1991: 335 and Herr 1991*b*).<sup>15</sup> At Tell al-‘Umairi itself an administrative complex dating to the Persian has been excavated. From the Hellenistic period, when this centre seems to have gone out of use, several buildings including what was clearly a small farmstead constructed on the southern edge of the site, above more substantial ruins from the Iron Age II have been reported (Egan and Bikai 1999: 500). The Hesban Region Survey (Ibach 1987) shows that of a total of 148 sites from Chalcolithic to modern times,

<sup>15</sup> See Geraty, L. T. et al. 1989, Herr et al. 1991 and Herr 1991*b*: 99–114.

only twenty-one sites yielded Hellenistic sherds and in small quantities, whereas the Early Roman period is represented at least fifty-seven sites. At Tell Hisban itself a fortification of four large towers linked by massive perimeter walls was constructed on the summit of the tell, c.200 BC (Egan and Bikai 1999, 500), quite probably a control post of the Seleukid period.

A survey of the Kerak plateau (Miller 1991) recorded 443 sites altogether (covering the periods from the Chalcolithic until modern times), of which sixty-eight sites yielded Hellenistic material (usually in small quantities), whereas only twenty sites revealed material dated to the Persian period. Also here there is a steep rise in the number of settlements in the Nabatean/early Roman period.<sup>16</sup> Two large-scale surveys in west-central/southern Jordan, (1) The Southern Ghors and Northeast Araba (SGNAS)<sup>17</sup> which included 240 sites and (2) the earlier Wadi al-Hasa Archaeological Survey (abbr. WHS) which included 1088 sites both have very few sites with Hellenistic material (MacDonald 1988). Thus on the 240 sites included in the SGNAS, Hellenistic sherds (see MacDonald et al. 1992 pl. 21 for examples of pottery) were recorded on only 7 sites, with a large collection only on one site.<sup>18</sup> All these seven sites are in the area immediately south-east of the Dead Sea, the major source for bitumen and asphalt. It should also be noted that there is copper in this area. In the WHS survey, in an area west of the SGNAS survey, the Nabatean period is very strongly represented, actually more so than the Roman and Byzantine periods.

More recently, the Tafila-Busayra survey covering 80km<sup>2</sup> and connecting with both WHS and SGNAS surveys (MacDonald et al. 2004), has recorded altogether 290 sites. The Hellenistic period is not well represented—it seems that the region was poorly settled in this period, just as it had been in the Persian (ibid. fig. 24). Also these surveys show the pattern with a steep rise in the number of settlements in the Early Roman/Nabataean period (and particularly in the Byzantine period). In the Wadi Faynan Project in southern Jordan, which had as its main aim a detailed study in the relationship between environmental change and human history in the arid zone (Barker et al. 1997, 1998, 2002), the overwhelming majority of finds in the extensive field system in the Wadi is from the Nabatean/Roman period (cf Kind et al. 2005, on coins). Copper production here must have been very small until around the beginning of the second century AD (also attested by radio-carbon dating of wood found in the mines).

<sup>16</sup> For further studies in the area see Mattingly 1996. The seventeen sites intensively surveyed confirm the pattern of settlement in Persian, Hellenistic and early Roman periods already recorded in the earlier survey.

<sup>17</sup> See *ADAJ* 1996: 323–37.

<sup>18</sup> Byzantine is by far the most common period on all sites.



### The 'Dekapolis'

The so-called Dekapolis cities (Graf 2002) were situated from Damascus in the north to Philadelphia/Amman in the south, the core area being between the Yarmuk in the north and Wadi Na'ur in the south. A common characteristic of these cities is that they are located where there is a plentiful supply of water, the majority on the slopes of mountains and hills east of the Jordan valley, in a zone where the average annual rainfall today is more than 350mm (Weber 2002: 34). In addition, for dry summers, aqueducts and large cisterns were established. These cities must all have had quite an extensive *chōra* that could support the city, which presupposes that in some areas there must have been a substantial number of villages and farmsteads. Polybios' description (5.70.5) of the *chōrai* of Skythopolis, and the as yet not securely located Philoteria on the shore of Lake of Tiberias, as capable of supplying Antiochos' army with food and everything necessary for a further expedition, suggests that in normal years the two cities were capable of exporting a number of agricultural products.

*Nysa-Skythopolis* (so-called possibly because Ptolemaios II settled Skythians here), the only Dekapolis city located west of the Jordan river, is situated in a fertile valley in north-eastern Samaria bordering the Jordan valley and may have been a polis already in Ptolemaic times. In the time of Josephus (*BJ* 3, 446) it was the largest of the Dekapolis cities. The site was occupied virtually continuously from the Late Neolithic to the Early Arab period (Foerster 1993; Foerster and Tsafir 2002: 72–87, see also [www.antiquties.org.il](http://www.antiquties.org.il)). It is situated at the most important road junction of the region, connecting the coast (Acco) with Damascus and Jordan. The Hellenistic-Roman site lies at the foot of the mound where the earlier city was situated. Most of the visible remains date from the Roman and Byzantine period, and much of the Hellenistic evidence consists of small finds, including several hundred amphora stamps, mainly from Rhodes and Knidos, dating between the end of the third and into the first century BC (Foerster 1993). In the first quarter of the second century BC, the Ptolemaic settlement on Tel Bet She'an was expanded, and a well-planned city, Nysa-Scythopolis, was founded by Antiochus IV on the nearby hill of Tel Ixtabba (Mazor and Najjar 2007). The Hellenistic polis was conquered and burned down by John Hyrcanus about 108/7 BC and was not resettled by the Hasmoneans (Bar-Nathan and Mazor 1993). One of the rare Hellenistic inscriptions in the region has been found at Nysa-Scythopolis. It is from the time of Demetrios II and mentions a cult to Zeus and to Seleukid rulers (*SEG* VIII, 33; Rostovtzeff 1935).

The main city of the Ptolemies in Jordan, *Philadelphia/Amman*, was only intermittently in the hands of the Seleukids (cf. Tscherikower 1927: 77 and

Cohen 2006: 268–72). Archaeological excavations indicate that the Ptolemaic city was restricted to the Upper and Middle Terraces of the Temple on the acropolis (Koutsoukou et al. 1997: 7), where there was a continuous occupation from the Iron Age II into the Hellenistic period. The fifty-three stamped amphora handles (Koutsoukou et al. 1997: 39–54) discovered during the excavations of the temple are nearly all Rhodian. Seventeen of these date from Grace's periods I and II (i.e. before 205), whereas twenty are securely dated to her periods III–V (until c.108 BC). Coins of the Hellenistic period from the excavations are few: a single Ptolemaic and four Seleukid, two Nabataean, and a single Hasmonean.

A very different picture is to be seen in several of the Dekapolis cities further north, where archaeological research has revealed a distinct growth during Seleukid reigns. Here I shall present just three of the cities. *Gadara* is perhaps the site that offers the best evidence of the amount of resources that were invested in the territory east of the Jordan River immediately after Antiochos' conquest of Koile-Syria. According to Polybios (5.70) Gadara was fortified by the Ptolemies and was considered the strongest city in the region at the time of Antiochos III's campaign in 219–217 BC (Fig. 12.5). The intensive German surveys and excavations at the site, concentrating particularly on the Hellenistic period, have added considerably to our knowledge of the city during that period. A survey in 1986 (Weber 1989) has confirmed a strong presence of Hellenistic pottery on the site and its immediate vicinity (including a large number of Rhodian amphorae, Attic black glaze pottery, and fragments of Megarian bowls). Detailed studies by Hoffmann (2000) confirm that the earliest parts of the fortifications of Gadara are Ptolemaic. However, there is clear evidence that Antiochos III quickly set about modernising the fortifications. German excavations have revealed parts of the fortification wall still standing up to 7m in height, with the whole southern part of the wall still preserved. This part of the wall is 2.2m thick. The joints are protected by pentagonal towers (Hoffmann 2002: Abb. 151), which also protect gates and posterns. This wall seems to have continued on the east side of the acropolis, whereas large square towers protected the southeast and southwest corners. Such a tower is also still visible on the north-east corner (Fig. 12.6). The wall is very finely built with courses of ashlar laid with headers and stretchers of local limestone in gypsum mortar (Hoffmann 2002: Abb. 154). Stratigraphic excavations along the south wall and analyses of the material found here would indicate that construction took place at the beginning of the second century BC and destruction about one hundred years later. A new wall was not erected until the second half of the first century BC. A hypothetical reconstruction of the whole area around the acropolis hill has been suggested by Hoffmann (2002: 152).

During the Seleukid reign the city may have been named Antiocheia Gadara (according to Stephanos) or Seleukeia Gadara, as suggested by a fragmentary



Fig. 12.5. Gadara, view towards the Yarmuk Valley, with Lake Tiberias in the distance.

inscription from the south wall (Wörle 2000).<sup>19</sup> Already at least in the second century BC the settlement extended outside the circuit towards the south-west. A monumental sanctuary (c.100×110m) enclosed by a temenos wall was situated north of the walls (Hoffmann 2002: Abb. 156). In the centre of the sanctuary was a temple built on a podium consisting of a number of vaulted rooms (Hoffmann 2002: Abb. 159 for a reconstruction). Architectural elements indicate that the temple was in the Doric style; Hoffmann suggests it was a tetrastyle temple. A propylon flanked by stoas gave access to the sanctuary from the south. The complex has been tentatively dated to the time of Antiochos IV. It may have been dedicated to Zeus Nikephoros, since a marble statuette of this god has been found on the temple plateau (Hoffmann 2002: Abb. 164). This god is also depicted on coins of the city from Roman Imperial times. The impressive building activities at Gadara during the first quarter of the second century and probably continuing during the century is also attested by a very significant growth of the number of Seleukid coins in comparison with coins from Ptolemaic period (Weber 2002: 64 n. 447, and p. 62).

*Pella*, south of Gadara, also shows a sudden bloom after the conquest of Antiochos. Earlier remains are rare on the site and consist of a few pottery sherds

<sup>19</sup> See Cohen 2006: 283–4 for a discussion of the names.

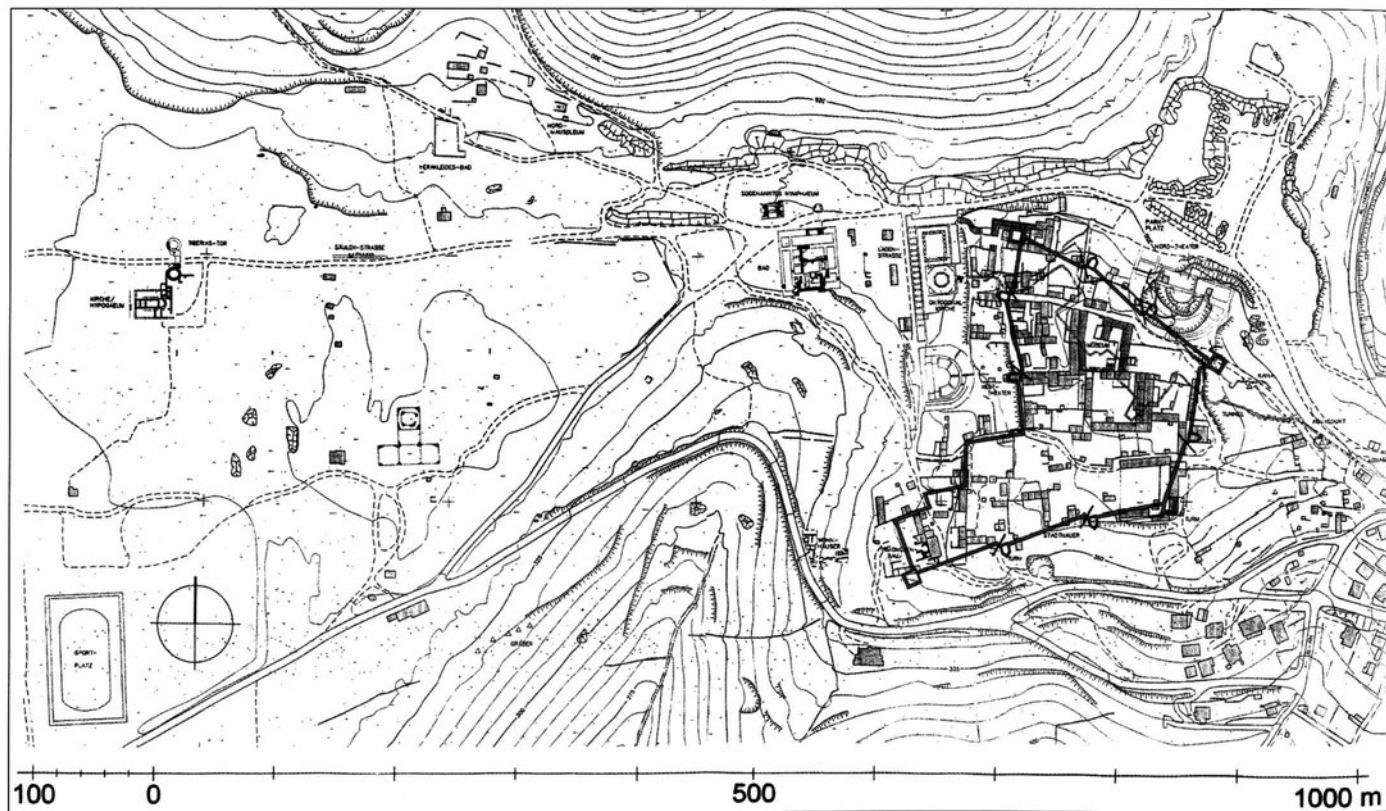


Fig. 12.6. Hoffmann's reconstruction of the Seleukid wall at Gadara (from Hoffmann 2002, fig. 153).

and coins.<sup>20</sup> No stratigraphic layers in the city can be dated to the Ptolemaic period.<sup>21</sup> A fortress on Jebel Sabarta (McNicoll et al. 1982: 65–7) may be Ptolemaic, whereas a new fortification was built on Jebel at Hammel with a layout adapted to the terrain (McNicoll et al. 1992: 103). In general, the considerable body of material from the site dates from the second to early first century BC. Some architectural remains from the city seem to be from a habitation area. Painted and decorated plaster walls from the houses suggest some wealth. There are large numbers of Rhodian amphorae, mainly from the first half of the second century, and also imported fineware pottery (possibly from Antioch). In Pella the destruction layers from the conquest by Alexander Jannaeus in 83–82 BC are clearly visible. It includes a coin of Antiochos XII (88–4).

## CONCLUSION

In recent years several scholars have pointed to war as one of the chief economic drivers in the Hellenistic world. Thus Austin (e.g. 1986, 2001) has stressed that the economic activities of Hellenistic rulers were for the most part closely related to their chief occupation: war. Frequently we get the impression that the kings fought wars to acquire resources to fight new wars (Chaniotis 2005: 4). I have pointed to the fact that Koile-Syria, or at least its western part, was prosperous during the early Hellenistic period, and thus a prize worth fighting for. However, for the successors of Seleukos, the conquest of this territory became an inherited royal obligation. Koile-Syria had been allocated to Seleukos I after Ipsos, but was immediately occupied by Ptolemy, whose role in the battle against Antigonos I had been much more modest.

In this chapter I have concentrated on the last Syrian war and its economic effect on the conquered territory. In an important article of 1990 Smith pointed out on the basis of much less evidence than is available to us now, that the southern Levant experienced an economic boom in the Late Hellenistic period. When we seek explanations for this phenomenon, two elements connected with warfare must undoubtedly be included: (1) that during military operations, destruction of resources was kept to a minimum, and (2) that after the war, new resources made possible intensive agricultural development. For an archaeologist, the low level of destruction is all the more striking when compared with the evidence of widespread destruction in the wake of the

<sup>20</sup> A very unusual find is a fragmentary marble lion which may date to the late fourth or third century, perhaps from a funerary monument? (McNicoll et al. 1992: 117–18)

<sup>21</sup> Mueller (2006) has suggested that in contrast to the Seleukid colonization, characterized by urban settlements, the Ptolemies founded few cities but rather smaller settlements or fortresses. Pella may thus not have been much more than the fortress on Jebel Sabarta.

Jewish Revolts. This may simply be a coincidence connected with the development of the war, though one would imagine that by now Hellenistic kings had learned to wage war in a way that kept intentional destruction to a minimum (cf. Chaniotis 2005, 122).

What archaeology cannot determine is, of course, the short term damage, such as looting and the billeting of soldiers, and how these affected local life. The rise in the number of settlements in the countryside after the Seleukid conquest must reflect an increased number of inhabitants, both in Israel and in north-eastern Jordan. Finds of imports such as Rhodian wine amphorae, and an increase in the number of registered coins, suggest a more dynamic economy. It is difficult to see how this could have taken place without a deliberate strategy on the part of Antiochos to develop his newly won territory. The influx of new settlers are more likely to have come from outside than from the cities on the coast, or from elsewhere in the new territories. Some may have been soldiers from the army left behind when Antiochos continued to campaign in Asia Minor. The effects of climatic change may also have played a part.

Comparing the economic networks of Koile-Syria, and for that matter Syria in general, with those of Mesopotamia, it is very clear that the region was turned towards the Mediterranean, rather than the eastern parts of the Seleukid kingdom (see Hannestad 1983; Hannestad forthcoming). The Euphrates may have formed a tax barrier between Syria and Mesopotamia (cf. Bikermann 1938: 115–18; Lindstroem 2003: 54), which drastically reduced the amount of casual trade and immigration from Greek areas and from the coastal region of Syria from the early third century onwards.

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# Rhodian Transport Amphorae as a Source for Economic Ebbs and Flows in the Eastern Mediterranean in the Second Century BC

JOHN LUND

The primary purpose of this chapter is to draw attention to the impact of climate variability on ancient economies by looking at the evidence for annual fluctuations in Rhodian wine production during the second century BC. A secondary aim is to assess briefly to what extent the data thus gathered calls for a re-evaluation of our current understanding of the Rhodian wine trade, in particular whether the establishment of Delos as a free port in 166 BC had an impact on it or not.<sup>1</sup>

## EVIDENCE FOR WINEMAKING IN RHODES

Wine was among the most important foodstuffs traded in the Aegean in the Hellenistic period,<sup>2</sup> and the importance of wine to the economy of the Rhodian state is hinted at by bunches of grapes that are occasionally depicted on her coins.<sup>3</sup> Wine was produced in the island itself, as well as in the Rhodian

I want to thank the organizers of the conference for inviting me to take part. I am also grateful to Mark Lawall for giving me a pre-publication version of his forthcoming paper and to Nathan Badoud for sending me an extract of his dissertation.

<sup>1</sup> For Hellenistic Rhodes, see Gabrielsen; Wiemer 2002; Rauh 2003: 65–75 and *passim*; Badoud 2007.

<sup>2</sup> It is hardly fortuitous that the index to *CEHGRW* refers to 19 pages treating trade in wine, and only 10 pages dealing with olives/olive oil. Moreover, the index to Wilkins and Hill 2006 refers to 64 pages dealing with wine and 32 dealing with olives (and oil).

<sup>3</sup> Franke and Marathaki 1999: 92–3. Cf. Dalby 2003: 281 for ancient literary sources referring to Rhodian wine.



Fig. 13.1. Rhodes and the Rhodian possessions, 188–167 BC, drawn by Jette Eeg based on Fraser and Bean 1954.

islands and Peraia, namely her territorial possessions in Asia Minor (Fig. 13.1).<sup>4</sup> The term ‘Rhodes’ refers to all of these areas in the present paper.

Archaeological field work has yielded precious little direct evidence for Rhodian wine production. A small rectangular building inside a fenced-in peribolos situated close to the sea at Agios Abbakoum on the east coast of the area of Ialysos has been interpreted as a fortified agricultural establishment and compared to a building of the Hellenistic period at Staphylia, not far from Lardos in the Lindos area.<sup>5</sup> However, the date of the structures at Agios Abbakoum is uncertain, and no finds seem to link them with actual wine production.<sup>6</sup> A weight stone found at a nearby site may just as well have been used for an olive as for a wine press.<sup>7</sup>

<sup>4</sup> See Fraser and Bean 1954; Gabrielsen 2000. So far there is only evidence of production of Rhodian amphorae in the Karian Chersonese in the ‘incorporated’ Peraia.

<sup>5</sup> Papachristodoulou 1989: 135–7 fig. 15; Gabrielsen 105–6.

<sup>6</sup> A building with a tower in the immediate vicinity of Idyma in the so-called subject Peraia was apparently used for the making of olive oil; cf. Gabrielsen 105–7.

<sup>7</sup> Papachristodoulou 1989: 140 fig. 17.b pl. 20.a; compare Hadjisavvas 1992: 63–4 Type 3 fig. 115. See further Bresson 2007: 164–5.

It is possible that country estates with huge pithoi like those recently excavated in Macedonia were also the focal points of wine production in Rhodes,<sup>8</sup> but such complexes have not been reported from the island. Presses and other installations used for winemaking are—generally speaking—rare in the Aegean from the fourth century BC through the Hellenistic period,<sup>9</sup> and one should perhaps reckon with the existence of non-permanent treading places, like the presumably wooden table-like *lēnoi* depicted on Greek vase paintings from the sixth century.<sup>10</sup> But in the island of Megisti, present-day Kastellorizo, some 133 kilometres east of Rhodes (and part of her Peraia), Norman G. Ashton identified 47 ‘patitiria’, i.e. treaderies, basins, and fermentation vats, scooped in the rock.<sup>11</sup> Ashton reports that comparable treaderies exist in Lemnos and the island of Gavdos to the south of Crete, but the date of these installations is far from certain and nothing similar has apparently been found in Rhodes.

Rhodian transport amphorae remain therefore a crucially important source of information about the wine production and trade of the island.<sup>12</sup> True, the widely held assumption that most of them originally carried wine remains unproven, but it is supported by the fact that bunches of grapes are at times shown on their handle stamps.<sup>13</sup> In the second century BC all (or nearly all) Rhodian amphorae were apparently stamped,<sup>14</sup> and one of the handles carried the name of the (annually changing) eponym, the priest of Helios.<sup>15</sup> Virginia Grace succeeded in working out the approximate absolute chronology of these priests, assigning them to seven periods (I to VII).<sup>16</sup> Gérald Finkielsztein later refined her results, maintaining the overall scheme, but opting for slightly lower absolute dates.<sup>17</sup> The new ‘low’ chronology has won general acceptance, and it is followed in this paper.<sup>18</sup>

Rhodian amphorae seem to have had a near-monopoly in the island,<sup>19</sup> whereas they are all but absent from the neighbouring Datça peninsula—the

<sup>8</sup> Poulaki 2003 with archaeobotanical data by Evi Margaritis; Margaritis forthcoming.

<sup>9</sup> See Smith 1994, where only six such presses are identified.

<sup>10</sup> Sparkes 1976.

<sup>11</sup> Ashton 1995: 45–67.

<sup>12</sup> Garlan 2000; Finkielsztein 2001a; Rauh 2003: 113–33.

<sup>13</sup> Nilsson 1909: 166. We are a long way from having identified the primary contents of the various amphora classes of Hellenistic Greece, cf. Lawall, forthcoming.

<sup>14</sup> See Lund 1999: 188 and Garlan 2000: 177. This paper only deals with Rhodian amphorae in order to eliminate the danger of overemphasizing stamped amphorae to the detriment of unstamped ones as was at times done in the past, see Lawall 2005.

<sup>15</sup> See Finkielsztein 2001a: 44–6 and id. 2004: 118–29.

<sup>16</sup> For a brief history of research, see Finkielsztein 2001a: 41–2 and the comprehensive bibliography in the same publication, 13–20.

<sup>17</sup> Finkielsztein 2001a.

<sup>18</sup> That there is scope for future chronological refinements is recognized in Finkielsztein 2004: 117.

<sup>19</sup> The presence of a limited number of Thasian, Sinopean, and Knidian amphora stamps in Rhodes does not alter the general picture. Thasos: Papachristodoulou 1989: 105; Garlan 1999: 185 no. 445, 188 no. 458, 203 no. 525, 206 no. 542, 288 no. 943; Zimmer and Bairami 2008: 130 no. A1345 fig. 93 and 138 no. A814 fig. 108. Sinope: Garlan 2007: 144–5; Zimmer and Bairami 2008: 197 no. A1473. Knidos: Zimmer and Bairami 2008: 123 no. A1296 fig. 89.

heartland of the rival wine producing centre of Knidos.<sup>20</sup> One is reminded of the Thasian Wine Law, which stipulated that Thasian ships were not allowed to bring foreign wine to Thasian territory.<sup>21</sup> Perhaps a similar inscription will one day be brought to light in Rhodes complete with clauses regulating the stamping of the amphorae,<sup>22</sup> but this is of course pure speculation.

In 1986, Jean-Yves Empereur and Maurice Picon reported the finding of more than twenty modestly sized amphora kilns ‘éparpillés dans la Chôra, installés sur la côte, sur la plage pourrait-on dire, souvent aux points d'embarquement, au débouché de petites plaines, ou même dans les zones de montagnes, aux points d'accès à la mer des vignobles qui s'étendent en altitude’,<sup>23</sup> and in the area of Kattavia in Southern Rhodes, a Greek–Danish survey identified a site with wasters from an amphora kiln in 1994, which seems to have functioned mainly in the first centuries BC and AD.<sup>24</sup> In the Peraia, Empereur and Numan Tuna investigated a kiln site near the Turkish village of Hisnarönü with stamped amphora handles from eponyms datable between about 266 and 209,<sup>25</sup> and Gonca and Ahmet Şenol and Ersin Doğer have subsequently investigated more kilns in the same area.<sup>26</sup>

Amphora kilns were often located at—or within easy distance of—the sea in the Aegean,<sup>27</sup> presumably because such locations facilitated sea transport. We have no way of knowing whether the vessels were loaded on the ships empty or filled with wine, but the latter seems more likely. From a modern point of view it would make sense to transport the grapes from vineyards in the interior to wine-producing estates situated in the coastal zone,<sup>28</sup> close to the kilns and seawater, with which the Rhodian wine was mixed.<sup>29</sup> But the ancient Rhodians may have thought otherwise, and only new archaeological fieldwork will eventually tell us how they actually went about these matters.<sup>30</sup>

<sup>20</sup> Empereur and Tuna 1989: 288.

<sup>21</sup> See Salviat 1986.

<sup>22</sup> The rationale behind the stamping of Rhodian amphorae is a thorny issue, cf. Garlan 2000, 153–72; Lawall 2005: 194–6; Garlan 2006; and Finkielsztein 2006.

<sup>23</sup> Empereur and Picon 1986: 115; see further Empereur and Tuna 1989: 291 and Whitbread 1995: 54.

<sup>24</sup> The find was briefly mentioned in AReps 41, 60.

<sup>25</sup> Empereur and Tuna 1989.

<sup>26</sup> Şenol et al. 2004.

<sup>27</sup> Cf. Garlan 2000: 37–44.

<sup>28</sup> Brock and Wirtjes 2000: 461; according to Dalby 2003: 353, the seawater was added before fermentation.

<sup>29</sup> Whitbread 1995: 10 suggests that workshops ‘were, in all likelihood, established on those estates that had access to the necessary raw material resources’. For Thasos, see Brunet 1993, 207. Contemporary viticulturists prefer slopes and hill sides over flatter terrains and consider the sea level to be too warm for wine grapes in hot regions.

<sup>30</sup> Perhaps it is not by chance that both of the two wine-producing estates in Macedonia and the structures at Agios Abbakoum and at Staphylia in Rhodes referred to above are located in the coastal zone.

## ANNUAL VARIATION IN THE WINE PRODUCTION

The Rhodian amphora stamps encapsulate a good deal of information, some of which has not previously been tapped. Thus, the near-certainty that amphorae with stamps naming the same eponym were produced (and filled) in one and the same year enables us to gain insight into the annual volume of wine production,<sup>31</sup> by simply adding up the number of occurrences of the names of the same individuals—without involving any statistics.<sup>32</sup>

A very large sample of such stamps from most parts of the Mediterranean and the Black Sea was processed in this manner (Fig. 13.2).<sup>33</sup> It comprises priests of Helios datable to periods III, IV, and V (between c.198 and 108 BC), sorted according to the frequency in which their names occur—not their presumed absolute dates. The year in which *APATOΦANHΣ* 2 officiated marks a low point (six occurrences in period Vc), and a peak is represented by the year named after *ΠAYΣANIAΣ* 3 (128 occurrences in period IVb). The other names are distributed in between.

Certain years (like that of *ΠAYΣANIAΣ* 3) were obviously exceptionally good for the wine producers of Rhodes. Others were merely good or average, and in others still the yield was below average or catastrophically poor (namely the year of *APATOΦANHΣ* 2). Broadly speaking, over a three-year period, wine production would have been average in one year, below average in the other, and above average in the third, but this is of course a purely theoretical estimate, since two or more failed (or indeed above average) harvests might well

<sup>31</sup> That the amphorae were normally filled with wine in the year in which they were produced is implied by the observation in Lawall 2005: 196: 'Rhodian amphorae's stamps with indications of month indicate clearly the rise of production through the summer in anticipation of the September/October grape harvest and vintage.'

<sup>32</sup> For a more detailed examination of the annual fluctuations in the wine production, see Lund forthcoming.

<sup>33</sup> *Greece*: Athens (Jöhrens 1999a), Delos (Grace 1952; Grace and Savvatianou-Petropoulakou 1970), Eretria (Palaczyk and Schönberger 2003), Pella (Akamantis 2000), Rhodes (Nilsson 1909; Porro 1916; *IG* XII(1); Paris 1913). *Turkey*: Didyma (Jöhrens 2004), Labraunda (Säflund 1980), Pergamon (Börker and Burow 1998), Tarsus (Grace 1950). *Cyprus*: Nea Paphos (Barker 2004; Nicolaou 2005; Sztetyło 1976, 1984, 1990a), Kition (Calvet 1982, 1993, 2003); Salamis (Calvet 1972, 1978). *Syria to the Persian Gulf*: Gindaros (Kramer 2004); Hama (Christensen 1972), several sites (Börker 1974); Tell Sukas (information from the excavation archive in the Danish National Museum). *Lebanon*: Beirut (Aubert 2004). *Israel*: Akko (Ariel 2005; Ariel and Messika 2007), Beth-Shean (Ariel 2006a), Gamla (Ariel 2006b), Giv'at Yasaf (Ariel 1999), Jerusalem (Ariel 1990, 2000), Maresha (Finkielsztejn 1993; Ariel and Finkielsztejn 2003), Tel Anafa (Ariel and Finkielsztejn 1994), Samaria (Finkielsztejn 1993, 2001a), Tel Dor (Rosenthal-Heginbottom 1995), Tel Istabab/Skythopolis (Finkielsztejn 1993), Tel Qasile (Ariel 2006c), the Upper Galilee Survey (Ariel 2001). *Jordan*: Petra (Schneider 1996). *Egypt*: Akoris (Kawanishi and Suto 2005), Alexandria (Şenol 2001; Sztetyło 1975, 1978, 1990b; 1992a-b), Koptos (Ariel 2003b), Krokodilopolis (Empereur 1977), Tell Atrib (Sztetyło 2000), several sites (Crisuolo 1982; Nachtergae 1978). *Tunisia*: Carthage (Jöhrens 1999b; Lund 2007). *Italy*: Lilybaeum (Brugnone 1986), Syracuse (Gentili 1958). *The Black Sea region*: Callatis (Gramatopol and Bordea 1969), Istria (Canarache 1957), Tanais (Jöhrens 2001). *Museum collections*: Utrecht (Werff 1978), Warsaw (Sztetyło 1983).

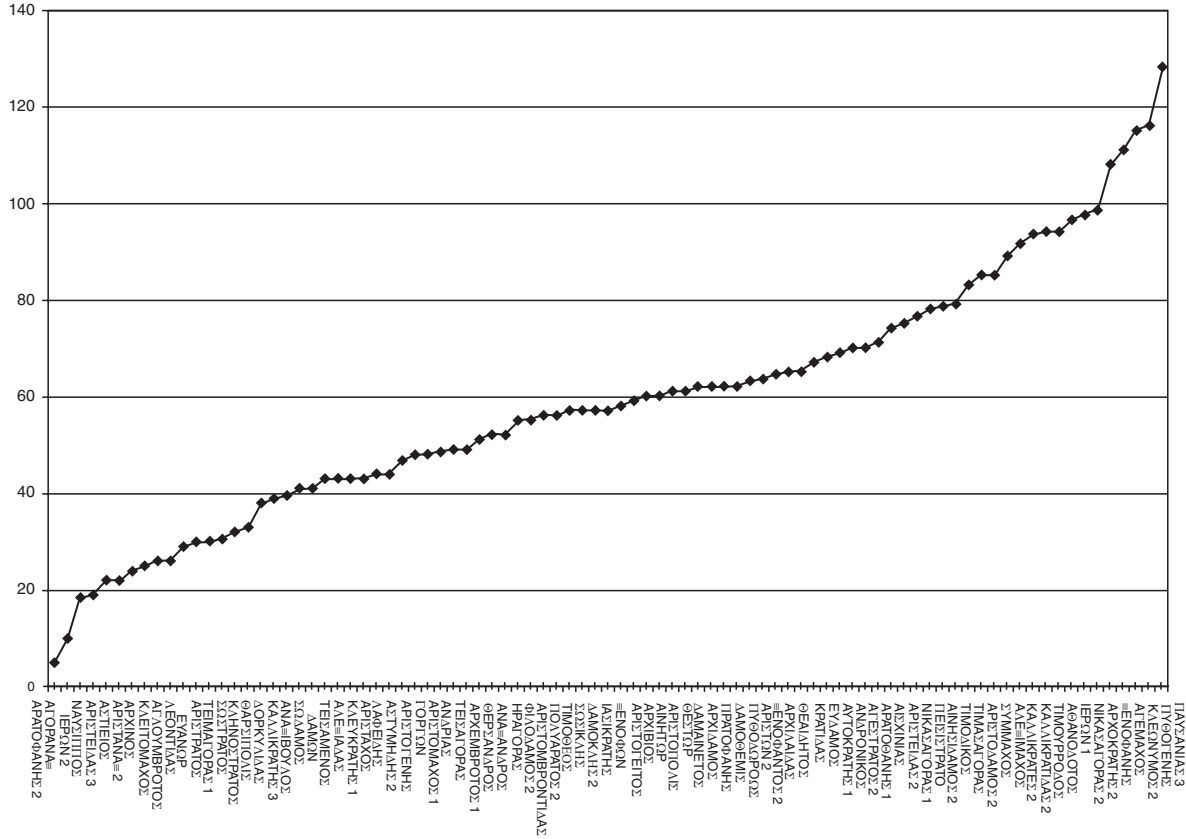


Fig. 13.2. Rhodian amphora stamps from a wide range of sites naming the *same* eponym priests (Periods III to V) (5124 examples), sorted according to frequency.



follow each other in real life. Still, this thinking accords with the evidence from the taxation of vineyards in Egypt, which was based on a three-year average, presumably precisely to take such annual variations into account.<sup>34</sup>

In this sample (Fig. 13.2), the average number of stamps naming the same eponym from all three periods is 59, but a closer look at the figures reveals considerable variation within each period: the average is thus higher in period IV (80) than in periods III (69) and V (44).<sup>35</sup> There is no reason to think that the environmental conditions were more favourable to wine production in periods III (198–161 BC according to Finkielsztein) and IV (160–146 BC) than in the second half of the second century. Hence, the explanation for the higher average in period IV should be sought elsewhere—perhaps in an effort to increase production by bringing new areas under grape cultivation.<sup>36</sup> Three inscribed stelai found at ancient Amos in the Rhodian Peraia lend some support to this notion. They contain 50-year leases of temple-land by the deme of Amos with specific instructions for the development of the land for viticulture.<sup>37</sup> Nathan Badoud dates two of them to the last third of the third century and the third to about 200 BC,<sup>38</sup> which fits with this assumption from a chronological point of view. New evidence for the agricultural development of the incorporated Peraia will probably emerge from Winfried Held's ongoing survey in the Karian Chersonese.<sup>39</sup>

That there was considerable annual variation in the Rhodian wine production has not—I think—been recognized before, but scholars have for long realized the impact of environmental factors on the ancient economy, in particular on short-term fluctuations in the production of foodstuffs.<sup>40</sup> In the words of Neville Morley: 'the climate in most regions and microregions of the Mediterranean can fluctuate dramatically from year to year, especially in the level of rainfall, so harvests tend to lurch between glut and dearth rather than offering steady and predictable yields. Periodic harvest failure and food crisis seem to have been the norm in antiquity, interspersed with the enjoyment of windfall surpluses.'<sup>41</sup> And Heinrich-Wilhelm Drexhage recently drew attention to figures from Asia Minor in the twentieth century, which show that

<sup>34</sup> Evans 1953–4: 63 n. 69; Bagnall and Derow 2004: 153.

<sup>35</sup> In period V the year of *ΝΙΚΑΣΑΓΟΡΑΣ* 2 (97 occurrences) represents the maximum, and that of *ΑΠΑΤΟΦΑΝΗΣ* 2 (5 occurrences) the low point.

<sup>36</sup> See Bresson 2007: 172–4.

<sup>37</sup> Fraser and Bean 1954: 6–20; Bresson 1991: 76–83 nos. 49–51; Salviat 1993.

<sup>38</sup> Badoud 2007: 663–6.

<sup>39</sup> See [http://www.poliskultur.de/43\\_Bybassos%20und%20Kastabos.html](http://www.poliskultur.de/43_Bybassos%20und%20Kastabos.html). Winfried Held has kindly informed me that the forthcoming publication of the International Symposium: 'Olive Oil and Wine Production in Anatolia during Antiquity KAAM, Mersin 6.-8.11. 2008' will contain new information about the results of this project.

<sup>40</sup> See e.g. Garnsey 1988; Reger, 90–1; Bresson 2007: 165–9.

<sup>41</sup> Morley 2007: 24–5 and 86 for wine dealers afflicted by a poor harvest; see further Drexhage 2007: 153–8 and *passim*.

‘es in einem Zeitraum von sieben Jahren durchschnittlich zu 1–2 Missernten kam, die meistens durch zu geringe Niederschlagsmengen, Kälteeinbrüche oder aber auch durch Schädlingsplagen verursacht wurden.’<sup>42</sup> The passage refers to the grain harvest, but other crops were subject to similar conditions.<sup>43</sup>

Still, the realization is surely relevant to our understanding of the economy of Rhodes in the Hellenistic Age, because if it is true that her commercial relations with Alexandria were founded on the principle that the Rhodians traded their wine for Egyptian grain, which they sold in turn on other markets,<sup>44</sup> then it follows that annual variations in the wine production must have impacted inversely on trade as well. The Rhodian merchants could have countered this by stockpiling wine from years with above average production,<sup>45</sup> but this would probably have been a short-term solution, because Rhodian wine is usually considered to be ‘vin ordinaire’, which might not have benefited from ageing.<sup>46</sup> Also, this strategy would hardly have made up for a succession of failed grape harvests.

## TOWARDS A BETTER UNDERSTANDING OF THE RHODIAN WINE TRADE?

Besides providing information about annual variations in wine production, the data gathered here allows us to glimpse the overall pattern of Rhodian wine production, since this comprises a large sample of stamps from the island itself, as well as from export markets (Fig. 13.3). In the latter, eponym stamps have been calculated according to decades in order to compensate for minor uncertainties in the current chronology of the magistrates involved,<sup>47</sup> and the chronological framework has been expanded to comprise the period between 240 and 80 BC.

The graph (Fig. 13.3) is indicative of a gradual increase in the number of eponym stamps—and hence wine production—between about 240 and 190 BC, followed by a dramatic growth between 180 and 170 BC. After a slight decline, between 180 and 160 BC, after which came a moderate recovery, we witness a

<sup>42</sup> Drexhage 2007: 153.

<sup>43</sup> For fluctuations in the production of olive oil in Southern Argolid, from 1960 to 1980, see Foxhall 2007: 212–14 fig. 6.36.

<sup>44</sup> Gabrielsen 64–84; Rauh 1999; Lund 1999: 201–2; Franke and Marathaki 1999: 92. For the Rhodian grain trade, see Bresson 95–9 (first pub. 1980) and Gabrielsen 71–3 and *passim*.

<sup>45</sup> See Reger 92–3, though the cases quoted there may not be strictly comparable since they insured not the merchants but the farmers ‘against frequent poor years and rarer, but inevitable, disasters’; see also Drexhage 2007: 157.

<sup>46</sup> Cf. Dalby 2003: 281; Bresson 2007: 180–1.

<sup>47</sup> The eponyms dated by Finkielsztejn to a range of years spanning more than one decade having been distributed between the ten year periods in question in accordance with the principles set out in Millett 2000: 56.

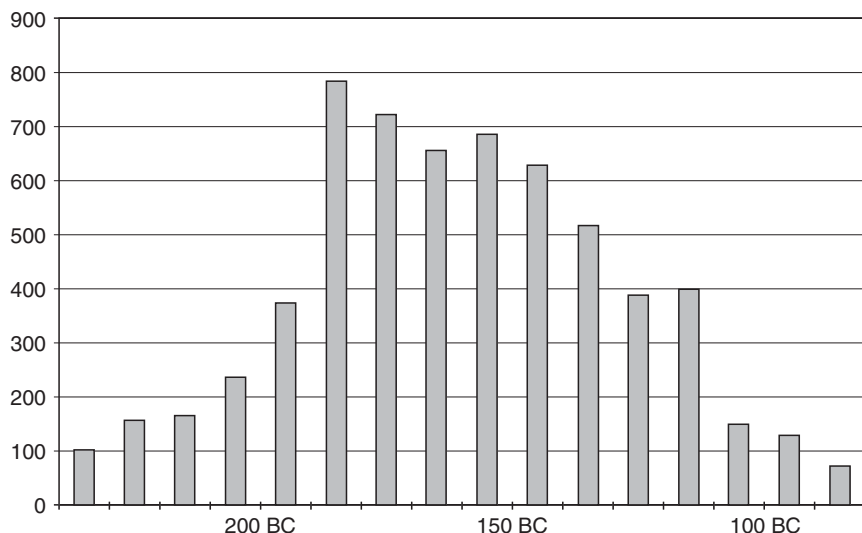


Fig. 13.3. The chronological distribution of Rhodian amphora stamps naming eponyms from a wide range of sites in Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Jordan, Egypt, Tunisia, Italy and the Black Sea (6133 specimens).

new decline between 130 and 110 BC, and an even steeper one between 110 and 80 BC.

On the face of it, this suggests that the Rhodian wine output culminated between about 190 and 150 BC, but the sample includes relatively few stamps from Alexandria, the largest single recipient of Rhodian wine by far, because only a small percentage of the more than 100,000 stamped Rhodian amphora handles found there has been adequately published.<sup>48</sup> When the available (scanty) evidence from Alexandria is looked at in isolation (Fig. 13.4),<sup>49</sup> we see that the number of eponym handles culminated between about 150 and 120 BC.<sup>50</sup> If this sample is representative of the huge number of unpublished stamps from the city, it follows that the second half of the second century ought to be far better represented in the overall count than it is at present (Fig. 13.3).

It is accordingly difficult—if not outright impossible—to credit the notion that the export of Rhodian wine declined dramatically after 166 BC. The overall figures (Fig. 13.3) actually reflect a moderate decline at an earlier date (between 180 and 170 BC,) followed by a slight rise between 160 and

<sup>48</sup> Empereur 1998: 398.

<sup>49</sup> Based on the publications quoted in n. 33 above.

<sup>50</sup> This pattern is not dissimilar to the chronological distribution of the Rhodian handle stamps naming fabricants in the Benaki Collection, as reported by Grace, whose figures had seemed incompatible with those of the handles found in the Polish excavations in Alexandria when dated using the pre-Finkielsztejn chronology, see Grace 1985: 42–3 and Lund 1999: 195–201.

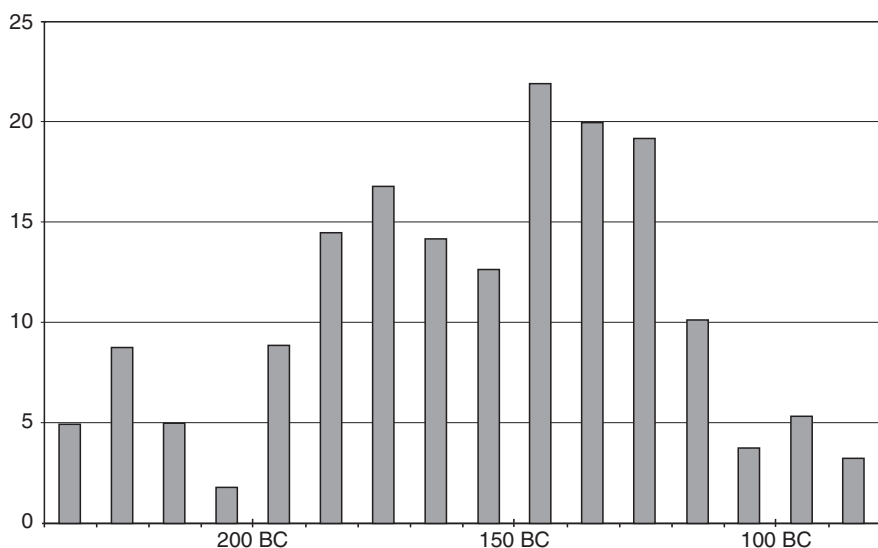


Fig. 13.4. The chronological distribution of Rhodian amphora stamps naming eponyms from Alexandria (170 specimens).

150 BC, and if the small sample from Alexandria (Fig. 13.4) is indeed representative of the many unpublished (and poorly published) stamps from that city, then it seems certain that Rhodian wine production continued to flourish between 150 and 120 BC, as archaeologists and historians alike have indeed been prepared to believe, even if their assessments differ in detail.<sup>51</sup> In fact, Rhodian wine production in the second half of the second century may have exceeded that of the first half, but more data needs to be published from Alexandria before this can be stated for a fact.

## CLIMATIC FACTORS AND THE ANCIENT ECONOMY

The main conclusion to be drawn from this chapter is that we still have a lot to learn about the modalities of wine production and trade of Rhodes. The best estimate that can currently be made of the overall production of Rhodian wine is that it probably culminated between about 190 and 120/110 BC. Micro-trends within this time span will continue to escape us until new data become available. But the realization that the annual output of Rhodian wine fluctuated from one

<sup>51</sup> Cf. Gabrielsen 71; Rauh 1999: 166–8; Lund 1999: 199–201; Finkielsztejn 2001*b*: 193; Wiemer 2002: 339.

year to the next does have an impact on our understanding of some of the underlying economic conditions of the ancient world.

Gary Reger has convincingly demonstrated the economic importance of regional markets, on the evidence from Delos and the Cyclades.<sup>52</sup> Yet a high degree of self-dependency does not exclude extra-regional importations,<sup>53</sup> particularly in years of crop failure.<sup>54</sup> Climate variability from one region to the next should therefore (together with other factors causing crop failures) be regarded as one of the 'engines' which kept the inter-regional trade going—or flowing. The economic model for Antiquity put forward by John K. Davies in 1998 emphasized precisely the flow(s) of resources,<sup>55</sup> and the evidence presented above implies that the 'out of region' exchanges of this model did not represent a steady and continuous flow, but one of varying intensity from one year to the next—perhaps even interrupted altogether from time to time: an economic circuit that may have been inherently less stable than we are wont to believe.

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<sup>52</sup> Reger.

<sup>53</sup> Reger 2002.

<sup>54</sup> Bresson 279–81; id. 2008: 160–4.

<sup>55</sup> Davies 1998: 242–51, esp. fig. 11.3.

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## Networks, Hierarchies, and Markets in the Ptolemaic Economy

J.G. MANNING

Social networks have been the primary fabric of many economic interactions for centuries, if not millennia.

(Jackson 2008: 328)

### INTRODUCTION

The economist Oliver Williamson (1975) famously argued for two basic forms of economic coordination: hierarchies and markets. Increasingly, social theorists now recognize three, not mutually exclusive, forms of economic coordination: market, hierarchy, and network (Figure 14.1). Despite the origin of the social theory in analyses of modern market economies and the concept of transaction costs, all three forms of coordination were present in the ancient world as well, however differently configured they were, and however much more overlap there likely was between the three in ancient societies.

I explore in this chapter the relationships between social networks, state hierarchies, and the development of markets in Ptolemaic Egypt, and I highlight both the role of the state and the role of individuals as economic actors. The formal analysis of social networks has lagged behind other techniques of social analysis in ancient history, despite the facts that social networks as such have been acknowledged for a long time and that networks are crucial in understanding social structure, social change, patterns of exchange, and so on.<sup>1</sup> Social networks

<sup>1</sup> This is beginning to change. For a summary of work on network analysis in ancient history, see Graham 2006, Ruffini 2008, and Malkin et al. 2009. I am grateful to Timothy Guinnane, Giovanni Ruffini, Dorothy Thompson, and the editors of this volume for offering comments and suggestions on earlier drafts of this chapter.

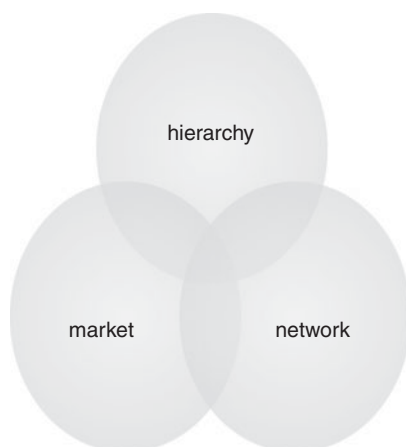


Fig. 14.1. The overlapping relationship between the three forms of coordination (after Thompson et al. 1991: 17).

serve as both glue that binds individuals to larger structures, ‘providing order and meaning to social life’, and a lubricant ‘for getting things done’ (Smith-Doerr and Powell 2005: 379). Social networks are also crucial in ‘generating trust’ (Granovetter 1992: 60), and in the enforcement of norms, both of which are important components of interpersonal exchange. The papyri from the Ptolemaic period, which provide some of the most important evidence for social networks in Antiquity, together with increasingly better archaeological survey, at least in some areas of Egypt, certainly provide fascinating raw material with which to work. The study of social networks documented in the papyri, therefore, should be a priority for historians of the Ptolemaic economy.

I explore economic coordination in two contexts. The first is that of the personal social network of an individual involved in a textile market in Memphis in the second century BC. The evidence for this man’s activities provides important documentation for private market activity and for its territorial scope. The form of coordination that I discuss, one established to supply the Ptolemaic army with war elephants, was of a very different kind. It involved the Ptolemaic kings in (a) international relationships, in this case primarily with the kingdom of Meroë, which was in a tributary relationship with the Ptolemaic state in the third century BC, (b) the use of a bureaucratic hierarchy, and (c), to an extent not easy to determine, social networks that Ptolemaic explorers established with local hunters. The state hierarchy of officials created a supply network that included the building of ports, way stations, transport ships, roads and a postal system that serviced the new traffic. In order to contextualize Ptolemaic economic coordination, I first provide an overview of economic structures and state aims.

In the past, analyses of the Ptolemaic economy have tended to focus nearly exclusively on the role of the state in economic activity, the so-called 'économie royale' and its new demands on the countryside (Préaux). The focus on the state is justified, of course, since it played an important role in economic activity, but that scholarly focus tends to privilege the fiscal institutions introduced by Ptolemy I and II and the bureaucratic hierarchy rather than economic activity *in toto*, or the role of individuals in that activity.

The formation of markets has been one of the principal occupations of both historical sociology and economics, and it has been addressed from many angles. The economist John Hicks (1969: 6) identified three 'economic states of society': subsistence, command, and market, the latter generated by 'specialization in trade' (1969: 25). But as John Davies (2009) has rightly emphasized, these three 'states' were not sequential but concomitant. All three 'states' were present in early societies.<sup>2</sup> The important issue for economic historians, rather, is to determine the relative mix of these, and the causes for change in this mix. This orientation, and the study of the complexities of the ancient world that the documentation of the Hellenistic economies suggests, prompts us to think in terms of performance as well as structure and comparison in the study of ancient economies.<sup>3</sup>

## HELLENISTIC ECONOMIES

Hellenistic economies have been especially difficult to characterize because they were heterogeneous, reflecting the past history of a diverse eastern Mediterranean world dominated, or at least influenced, by two very different imperial regimes, Athens and Persia. That heterogeneity is no doubt a feature of other periods in ancient history, but studying Hellenistic economies is made yet more challenging with the addition of Near Eastern economies and their diverse institutional histories. Be that as it may, a few facts are clear. War, the funding to fight war, and coinage, the three being of course linked, had profound, if differential, effects throughout the Hellenistic economies.<sup>4</sup> Two other macro-observations about the Hellenistic period are important to note. The first is the seeming jump in scale of exchange compared to the fourth century, and the second is the new institutional basis of state revenue. These new features were driven by two primary motors already mentioned: hyper-competitive warfare between the Hellenistic states,

<sup>2</sup> See the analysis and a summary of the debate on the extent of markets in ancient Egypt by Warburton 1997: 75–96. On Hellenistic markets, see in summary Archibald 2005.

<sup>3</sup> Cf. the remarks by Morris, Scheidel, and Saller 2007.

<sup>4</sup> On the impact of war in the Hellenistic world see most recently Chaniotis 2005, esp. 115–42.

particularly in the third century BC, and coinage.<sup>5</sup> We might call these the Hellenistic dyad, and in both cases they stemmed from a Greek city-state mentality established now on a territorial scale in the east. In Egypt itself, among other developments new immigration, new institutions set in place by the mid-third century BC, the building of the Mediterranean's first super city, Alexandria, the reclamation of the Fayum, and the introduction of coinage in the taxation system suggest that this was a time of enormous change. This was a world of hybridization that can be observed in structures of governance, in economic institutions, in written legal forms of contractual relationships, in language and religion, in art, and indeed in many other areas as well.

## STOCKS OF KNOWLEDGE

Two things must be considered before turning to the Ptolemaic economy itself: (1) how Egypt worked before the Ptolemies arrived, and (2) the Greek institutional heritage of the Ptolemies. The Nile flood regime and the social organization that formed in response to flood recession agriculture are crucial factors in the economic structure of Egypt (Butzer 1976). Neither of these was easily changed, and they continued to shape the organization and the scale of the economy as well as the structure of governance. The palace and the larger temple complexes located throughout Egypt played a major role in storage and redistribution of grain (and other commodities) and in the management (record-keeping, land survey) of resources. At the village level, barter and (to some degree not easily quantified) market exchange facilitated private exchange.<sup>6</sup>

In the early first millennium BC, Egypt was divided into several polities in the north and south. Political reunification was achieved in the seventh century BC by the Saite kings. Large construction projects, particularly visible because of the extensive use of stone, always associated in Egypt with periods of strongly centralized state control, were inaugurated. Beginning in the seventh century BC, Greeks settled in Egypt, both as soldiers and as traders in the Delta town of Naukratis, and elsewhere. The administrative structure, notably the political division of the state into nomes or administrative districts, appears to have been retained in its traditional form (Lloyd 1988*b*: 332–3 provides a brief summary).

<sup>5</sup> On the important role of coinage in state finance, and the important differences between the Seleukid and Ptolemaic attitudes toward coinage, see Le Rider and de Callatay 2006.

<sup>6</sup> Village exchange is briefly but well discussed by Kemp 2006: 319–26. See also Criscuolo (this volume).

The Saite dynasty, especially during the reign of Amasis (570–526 BC), was a period of political consolidation and economic expansion.<sup>7</sup> The Demotic script, originally a local script of the Delta, came to be the standard written language used in private legal agreements throughout Egypt. Several other institutional features of the period show the continuities with the later Ptolemies. The first reveals the connections Egypt had with the Aegean. The projection of Saite economic and political power in the Mediterranean, in the Red Sea, and into Syria-Palestine was supported by a fleet.<sup>8</sup> In large part this was a reaction to the Persians, but it was also a continuation of the second millennium BC inter-state competition for the control of trade flows through Syria-Palestine. Amasis' alliance with Polykrates of Samos is especially noteworthy.

It was also in the seventh century that Karian and Ionian Greeks, Phoenicians, and Jews began to be settled in large numbers. Many in these diverse communities of immigrants assimilated to Egyptian culture to a remarkable extent during the Late Period.<sup>9</sup> Coinage, however widespread it actually was, also began to be used. As part of the consolidation, the Delta-based kings established a condominium with the Theban priesthoods and generals, and appointed loyal city 'governors.'<sup>10</sup> Here again the traditional pattern of administering Upper Egypt as a distinct region emerges, with caution applied because of the sensitivities involved, and because of the great influence of the Theban temples. The cultural continuities between the Saite and Ptolemaic kings, via the important conduit of the priesthoods, were strong.

In addition to Egyptian structural continuities—the administrative divisions of the country, the continuing importance of temples and the regional economies that they administered, the collection of a share of the harvest on all land, and other taxes from trade and sales—the Greek economic mentality, including the increasing importance of market exchange, and the revenue-creating institutions that emerged in the wake of the Athenian loss of empire in fourth century BC, must be incorporated within any model of the Ptolemaic economy.<sup>11</sup> Thus we must somehow strike the balance between structural continuities and new (creative) Greek economic thinking, including the 'fiscal expertise' (Davies 2004) that was deployed by Greeks in Egypt in this period.

<sup>7</sup> Hdt. 2.161–3, 169–74, 177–9, 181–2. Cf. Diod. Sic. 1.79, 94–5. For Herodotus on the Saite dynasty, see Lloyd 1988b: 174–241.

<sup>8</sup> Hdt. 2.159; Lloyd 1977; 2000.

<sup>9</sup> Ray 1994: 54–9.

<sup>10</sup> The so-called *Nitokris Adoption Stela* provides important testimony to the relationship between the king and the Theban priesthoods.

<sup>11</sup> On the traditional harvest tax in Egypt and the continuation of the practice by the Ptolemies, see the summary by Vandorpe 2000. In speaking of Greek mentality, I mean not so much the literary evidence that Cartledge 1998 speaks about, as of particular actions in the economic sphere such as Nikophon's silver coinage law of 375/4 BC (RO 25).

Thinking was put into practice with the state minting of coinage and its demand in the taxation system. The impact of coinage should not be underestimated. Among the other issues which the use of coinage raises is the fact that it has embedded in its nature the idea of 'transaction cost' and thus, in some cases at least, the ability to calculate those costs. Greek numeracy (and thus the role of coinage as a means of counting) was a vital instrument for fulfilling Ptolemaic aims as well as a driver in the new mentality in those areas where coins were used.<sup>12</sup>

## PTOLEMAIC AIMS

The economy of the king and the Ptolemaic economy as a whole have usually been conflated into one entity called the 'royal economy', i.e. the fiscal system created to finance the 'household' of the king, including the state bureaucracy.<sup>13</sup> It has been common to distinguish between a private and a royal sector, or even a tripartite division into private, public, and royal (Briant 2006). But the lines between these are unclear, and suggest a distinction that, in my view, does not matter. More importantly, though, such a conception tends to overlook private economic activity as well as that in temple estates. To a certain extent, of course, such activity was also linked to the royal economy via the taxation system, but Ptolemaic reforms did not completely disembed local production from kinship and priestly groups.

The Ptolemaic economy consisted of two ancient economic modes joined by the bureaucratic hierarchy but also linked by increased market activity that was driven by coinage. But this is not to echo Finley's view (Finley 183) that Hellenistic economies merely joined an 'ancient' Greek economy to an 'oriental' one. There is something rather new in Hellenistic economies, and to state that we have before us in these last three centuries BC more of the same both in terms of Greek economy and in terms of that of ancient Egypt is no longer borne out by what is known.<sup>14</sup>

The linkages, for example, between the royal economy and the village-centred economies were new. The problem, then, is to analyse the relationship between the state and local society (which of course I can only hint at here),

<sup>12</sup> For a superb summary of Athenian economic activity in fourth-century Egypt, see Davies 2004. On numeracy, see Netz 2002.

<sup>13</sup> Préaux 569; Descat 2003: 156. The same working definition is adopted by Aperghis in his study of the Seleukid royal economy. I develop the ideas in this chapter more fully in Manning 2009. In that broad sense, the concept of the royal economy as the household of the king is an ancient notion. The description comes not only from pseudo-Aristotle, *Oikonomika*, as Descat 2003: 153 points out, but also from much earlier Egyptian thought. See *inter al.* Goelet 2004.

<sup>14</sup> See the programmatic remarks by Davies 2001.



and between demand creation and supply. As elsewhere, political and economic processes cannot be separated.<sup>15</sup> The political economy determined at the outset of the game the 'ruling coalitions' in the state, the structure of land ownership and access to it, exchange relationships, status hierarchies, and so on. The political economy of the Ptolemies also altered pre-existing social ties in the villages, and to some extent determined new ones based on status within the royal economy.<sup>16</sup> All of these issues, the kinds of social ties, and the strength or the number of ties within a social network, can be quantified by social network analysis and would surely help us understand the nature of the linkages between state and local economies, and the important connections between market activity and social networks.

In Rostovtzeff's view, the Ptolemies continued the tradition of ownership of the land by the king and the compulsory labour system, the 'twin pillars' of an 'Oriental state.'<sup>17</sup> The first, royal ownership of the land, was rather more limited in practice. Although the king retained the right to assign tenure to land, and used the Greek institution of public auction for such purposes at least on occasion, the process of enforcing state ownership of land was rather limited to a certain class of land, called royal land, that was leased out to tenants.<sup>18</sup> In Upper Egypt, the region with strong temple control over land, more ancient traditions of landholding by temple dependants continued. But like the second 'pillar', compulsory labour, land tenure patterns were dictated more by local custom and needs than by royal fiat. Traditional patterns were merged with new settlement patterns, above all in the Fayum but also with the establishment of a Greek military presence in the south, as well as by the new fiscal institutions of banks and royal granaries that gradually became established in local communities. A recently edited Greek land survey from the Edfu nome dated to 119/118 BC confirms the widespread and ancient custom of private holding of land in the south, although the regular rates of taxation of the land, predominantly temple land in the south, are comparable to those for royal land in the Fayum.<sup>19</sup> Here we have a good example of Ptolemaic aims: continuity of tenure conditions together with new fiscal institutions applied to taxation mechanisms.

Unlike under previous regimes, Ptolemaic revenue consisted of two principal components, revenue in grain and revenue in cash, generated by a 'new kind of economic machine' (Davies 2006: 82) primed largely by cash. This new element, cash generated by taxation, was the product of new state policies,

<sup>15</sup> Furubotn and Richter 2000: 21–2.

<sup>16</sup> For the distinction between 'weak' and 'strong' ties in networks and their important effects, see Granovetter 1973.

<sup>17</sup> *SEHWW* 271.

<sup>18</sup> On the public auction, most in evidence after the Theban rebellion, post 186 BC, see Manning 1999; Vanderpe 2000: 173.

<sup>19</sup> Christensen 2003.

particularly Ptolemy II and his major fiscal and legal reforms (von Reden; Manning 2009). These reforms involved the building of several new institutions in key areas of Egypt. Among these were the tax farming system and the creation already mentioned of royal banks and royal granaries into which tax revenue was paid. The central institutional concern of the early Ptolemies was to 'gate' revenue flows at important trade nodes or 'gateway communities'.

## GATEWAY COMMUNITIES

The Ptolemaic need for revenue in cash led to the development and extension of the collection of tolls at 'gateway communities', the location of key nodes of trade into and out of which trade (and tax revenue) flowed.<sup>20</sup> Egyptian temples were often situated at these key nodes, and it is no accident that the Ptolemies paid close attention to some of these institutions. This was not a new technique; indeed the Persian Empire is well known to have used such gating of trade, and the practice extends further back in time both in Egypt and in the Near East.<sup>21</sup> The interest in 'gating' trade flows can be seen in southern Egypt, on the foundation of the city of Ptolemais in the late fourth century, and with the attention paid to Edfu in the 230s BC, when this important temple, at a key trade junction that joined desert traffic to the Nile, was rebuilt.

The history of the building project at Edfu is fascinating in itself, and provides a window onto Ptolemaic state history.<sup>22</sup> The Ptolemaic kings were no doubt keen to support new temple building projects at key sites in an effort to gain support from local elites. Direct state interest, if not the financing, of the new building project is reflected in administrative correspondence.<sup>23</sup> It was completed nearly two centuries later, on 5 December 57 BC. It would certainly have stood as a symbol of Ptolemaic power and prestige in the south, and it was certainly purposeful that the Edfu temple had the highest pylon ever built. Ptolemy VIII is recorded to have been at the temple inauguration in 142 BC. The pylons and the enclosure wall were erected in 116 BC, barely two years, then, after the amnesty decreed by Ptolemy VIII and his sister-wives that re-established order in the country.

New fiscal institutions introduced by the first two kings also served to gate revenue. Such was literally true, for example, in the case of trade flows in and

<sup>20</sup> For the concept, see Hodges 1988.

<sup>21</sup> See further Briant 2002: 377–87 and 930. Cf. [Arist.] *Oec.* 2.34a.

<sup>22</sup> On the building history of the Horus temple at Edfu under the Ptolemies, see Cauville and Devauchelle 1984, Clarysse 2000. For Ptolemaic Edfu, see also the historical sketch by Manning 2003.

<sup>23</sup> The texts come from the well-known Milon archive, on which see Manning 2003 and Clarysse 2003.

out of the Fayum via the desert roads. One had to go through gates (Gk. *pylai*) and pay a transit tax.<sup>24</sup> This was also the case at the port of Memphis that controlled traffic between Upper and Lower Egypt. Such 'gating' is clearly seen at Terenuthis in the western Delta, which stood at the head of a major trade route into the Wadi Natrun, and at Philae, the southern Nile gateway to Egypt. In other areas, as at the important temples in ancient Thebes, new gates were built to New Kingdom temples. Even if major trade was moving through other gateway communities, the new temple gates in Thebes reminded everyone who was in control. 'Gating,' then, captured revenue as well as ancient culture.

## VILLAGE NETWORKS

Social networks and exchange patterns in Egyptian villages can be seen in the movement of property by private sale. Consider for example, demotic Egyptian sales of land. In the Ptolemaic land conveyances that I have studied (Manning 2003) the movement of property frequently occurred between family members and between parties who held the same or similar status titles in the same village or town. This was typical of ancient contracting—they were *non-market* transactions embedded in local social relationships, and thereby relied on trust networks outside of any institutional arrangement (Granovetter 1992). They are, in other words, what are called relational contracts between persons living in a tight village network, perhaps even strengthened by what Lazarsfeld and Merton 1954 have called 'homophily' (i.e. the preference for doing business with people similar to oneself).<sup>25</sup> We do not often know the exact nature of the transfer, but it appears likely that many of the demotic conveyances of land were connected to inheritance or to disputes about ownership within family structures.<sup>26</sup>

One must retain caution in interpretation. In this particular case, it is not easy to decide if we are dealing technically merely with a social or ethnic group, or with a new, state-created social network formed in part by the demand for soldiers in the contentious south of Egypt that created a new status among those who so served.<sup>27</sup> The pattern of the movement of property between those with similar status was in any case common.

Whether or not the preserved material reflects a normal situation or unusual socio-economic circumstances, the preserved instruments are instructive for local horizontal social networks and economic patterns. Another good example of how a village social network shaped economic behaviour is documented in a series of land leases (dated to years 7–10 of Ptolemy IV, i.e. 216–213 BC) that have

<sup>24</sup> Sijpesteijn 1987.

<sup>25</sup> On relational contracts, see briefly Furubotn and Richter 2000: 265–82.

<sup>26</sup> Cf. Rowlandson 1981.

<sup>27</sup> On military communities, temples and social status, see Vanderpe 2008; Fischer 2008.

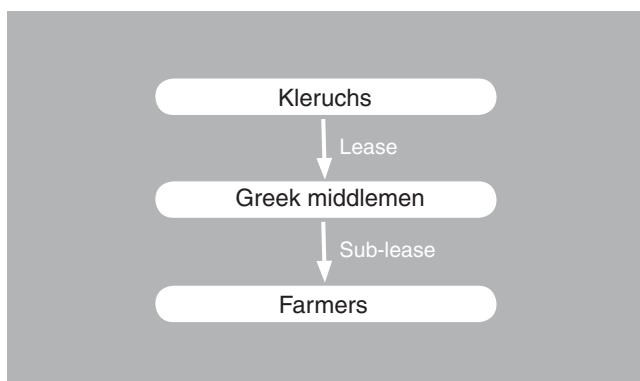


Fig. 14.2. The social hierarchy in the lease arrangements between kleruchs, investors, and farmers in Greek leases from the Oxyrhynchite nome studied by Bingen (1978).

been analysed by Jean Bingen (1978). In these leases from the area around the village of Tholthis in the Oxyrhynchite nome, we learn how a particular class of land given to soldiers, known as kleruchic land, was made productive. Partnerships, what Bingen has called ‘small-scale capitalist groups,’ were formed between the kleruchs, those who held a plot (Gr. *klēros*) but were often absent from the land itself, Greek middlemen who made capital investment with these leases and then sub-leased the plot under a share crop agreement, and the lessees themselves, often local Egyptian farmers. The general hierarchy of the network would have looked something like the schema set out in Figure 14.2. A mapping of the social network documented in these texts, which would include other documents from the same nome, would, I feel certain, yield interesting results.

The lessor in these leases was a kleruch, who held a plot of land. Such kleruchs were often designated a ‘private under the command of Philon’ or ‘not yet assigned a commander’. For whatever reason, frequent absence for service perhaps, he was unable to work the land himself and needed to lease out the land in order to derive an income. Greek agents served as middlemen. The lessees in these leases usually carried the status designation ‘of the succession’ (Gk. *tēs epigonēs*), a status generally viewed as signalling that they were the offspring of soldiers awaiting appointment as their father’s successor in the army and as heir of the land given in exchange for service. In any case they formed a bridge between the Greek military milieu and local society, and, as we will see next with Ptolemy the recluse, such agricultural contracts were an important method of joining ‘Greek capital with Egyptian labour’ (Thompson 1988: 226). The lessees had freedom to operate, and capital, but often no direct access to land. Their local knowledge allowed them to strike deals with local farmers to work the land.<sup>28</sup> Nearly half of

<sup>28</sup> On the status of *tēs epigonēs* see Clarysse and Thompson I. 463–65; Vandorpe 2008 for further discussion.

the leases studied by Bingen show that the lessees were in an economically stronger position, providing what in effect were loans to the nominal landholder. No state direction or institution is in evidence here. Rather, these were informal markets driven by local knowledge and personal connections.

Other cases of individual agency can be catalogued. Take for example the activity of Ptolemy, a religious recluse in the Serapeion at Saqqara, whose financial dealings in cloth are well documented in his archives.<sup>29</sup> From his detailed accounts that survive, we can get a taste of how a market in textiles was operated by a 'Hellenistic man of affairs' (Thompson 1988: 229). With Ptolemy's activity we have before our eyes a 'specialized merchant' in Hicks's use of the term, acting as a middleman 'through whom exchanges can be arranged that are in effect multilateral' (Hicks 1969: 27–8). The role of the middleman, in obtaining tenants for land or in market formation, is a very important aspect of all ancient economies; it is simply better preserved in the papyri.

Ptolemy exploited his personal network from his home area in the Herakleopolite nome, a major source of flax and its by-product, linen. His close personal connections to other local merchants, especially a rush seller who operated a cash business, allowed Ptolemy to unite 'Greek capital and Egyptian labour' (Thompson 1988: 226). Ptolemy's accounts, even if obscure in some of their details, allow us a window onto one man's partial social network that connected flax farmers, cloth dyers, and 'independent weavers' from the Herakleopolite nome to the city of Memphis and the Serapeion temple precinct where he lived. Villages in the Fayum were also involved, whence some textiles were purchased by a pair of female twins, young religious associates of Ptolemy also living with him in the Serapeion. Ptolemy's accounts show the flow of a commodity from the production of raw material, to weaving and dyeing, to a retail textile business—a business network extending over some 90 km. Ptolemy certainly exploited his knowledge of the temple district in which he resided to supply the much needed cloth material for burial use, both human and animal, and for many other purposes. This was one man, living not at the highest social level, who integrated, on a small scale, raw material and finished textile products through a personal social network (Fig. 14.3).

State agents might represent another type of middleman. The establishment of loyal agents throughout the state, who monitored activities and resources, and the creation of links between state institutions and key local nodes represented by Egyptian temples and their priesthoods and scribes, was, of course, a key for generating free-floating resources for the state as well as for market transactions. But we should caution against the existence of a bureaucratic structure being synonymous with efficiency or loyalty. Crone

<sup>29</sup> I rely here on the excellent summary of the accounts by Thompson 1988: 225–9.

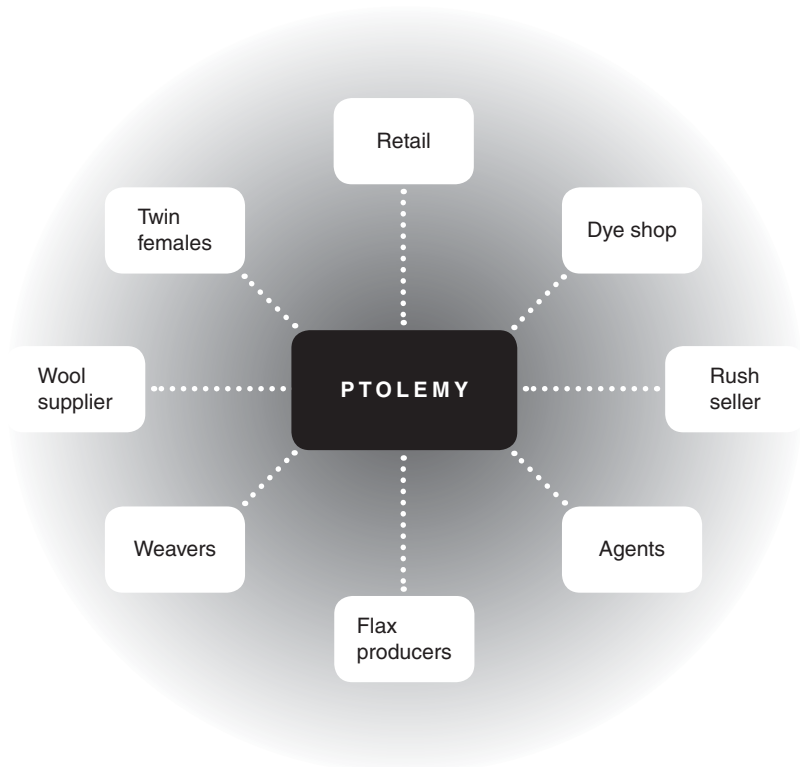


Fig. 14.3. Tentative partial reconstruction of the ‘cloth network’ of Ptolemy the recluse, linking him, in the Serapeion at Saqqara, to a personal network of flax producers, dyers, weavers and the ‘cash nexus’ of a rush seller. Based on Thompson (1988: 225–9).

(2003: 44–5) highlights a basic problem in early economies, the asymmetric flow of information:

The point to note, however, is that even the monarchy as an *impersonal* institution rarely enjoyed power of a kind that could be described as absolute. The fact that news travelled slowly, and troops even more so, invariably meant that considerable power had to be handed over to people on the spot, be they governors despatched from the centre, provincial magnates allied with it, or others. Only they could know what was going on locally and only they could react fast. By the same token, of course, they had considerable freedom to abuse their position, notably by fleecing the local population for private gain or by building up private power bases with a view to secession or bids for the throne.

The exceptionality of Egypt is the exception to the rule of the difficulty of communication. Few places in the Mediterranean offered the communication

corridor of the Nile river, and the Ptolemies, like their pharaonic predecessors, paid great attention to the control of the river corridor, which was the key not only to the flow of grain to Alexandria, but also to (relatively) rapid communication between the capital and its hinterland. Control of the river, shown for example during the great Theban revolt (205–186 BC) during which the Ptolemaic state appears always to have held the river, was a necessary condition for the state control of resources. To be sure the kings still required loyal local officials on the ground monitoring affairs, and this loyalty could rarely be taken for granted. Moreover, agricultural production, with up-to-date information needed on its progress, was a highly localized affair in a basin irrigation system such as Egypt.

Thus state agents were held personally liable for the performance of specific duties. This is stressed in official communication, most famously expressed in a late third-century BC letter between the *dioikētēs*, the chief finance official in Alexandria, and (it is presumed, but the recipient is not named in the text) an *oikonomos*, a nome (district) level official responsible for the state finances in the nome. On the grain supply to Alexandria itself, the *dioikētēs* urged:

Take care that the grain in the nomes, with the exception of that expended on the spot for seed and of that which cannot be transported by water, be brought down—It will this be [easy] to load the grain on the first [ships] presenting themselves; and devote yourself to such business in no cursory fashion—Take care also that the prescribed supplies of grain, of which I send you a list, are brought down to Alexandria punctually, not only correct in amount but also tested and fit for use.<sup>30</sup>

The text is clear. Specific commands of the central state, driven in this case by the demand for grain in the capital, are to be carried out by the state-appointed ‘man on the ground’. The political economy of the state played a major role in creating the flow of the commodity to the capital, and, moreover, in creating the super city that was Alexandria.<sup>31</sup> The nome level official had to respond to a list, presumably recording amounts of grain to be supplied, had to guarantee its quality, and presumably make sure it was loaded and sent down river. The administrative style also expected constant communication in the other direction, from province to the capital. In fact, it was the king who was disadvantaged by asymmetric information. The tie, therefore, between the *dioikētēs* and nome officials was a hierarchical but also (ideally) a personal one. It was, in the language of network analysis, a ‘strong tie’. The expected performance of the official, apparently discussed face to face in the capital, was

<sup>30</sup> P. Tebt. 703, 3.70–87, trans. Bagnall and Derow 2004: no. 103.

<sup>31</sup> Cf. the remarks of Morris 2004 on the connection between political economy and the size of urban areas.

reinforced by letter, and there were incentives to perform in the promise of promotion for a job well done:

I thought it well to write down for you in this memorandum what I told you in sending you to the nome. I considered that your prime duty is to act with peculiar care, honestly and in the best possible way—; and your next duty is to behave well and be upright in your district, to keep clear of bad company, to avoid all base collusion, to believe that, if you are without reproach in this, you will be held deserving of higher functions, to keep the instructions in your hand, and to report on everything as has been ordered.<sup>32</sup>

There is no hint here of a patron-client relationship between the *dioikētēs* and the *oikonomos*, but this was quite possible, and patronage networks are not unknown in the Ptolemaic documents.<sup>33</sup> The strengthening of ties between the administrative centre and the provinces was at least attempted by the annual meeting of village scribes with the *dioikētēs* in the capital.<sup>34</sup>

## EXTENSIVE POWER-SMALL WORLD NETWORKS: THE CASE OF ELEPHANT HUNTING

The Ptolemaic state, as with the pharaonic, presents us with a classical bureaucratic form of governance. A hierarchy of officials was put in charge of specific portfolios. The state's ability to control, to recruit and to maintain the loyalty of these officials remained problematic, but state demand, in combination with this hierarchy and the control and building up of nodes, could perform spectacularly well. Such was the case with my second example of a network, that of elephant hunting and transportation.

The early Ptolemaic state expansion south of Aswan re-established contact with a region, called Aithiopia in classical texts, which held much of economic interest.<sup>35</sup> This was a natural extension southward of Ptolemaic interest, both defensive and economic, a counterpart to its strategy in the Aegean, Cyrenaica, and the Near East. The Nubian Nile valley had been incorporated as a province of the New Kingdom Egyptian state c. 1500 BC, and the Saite kings,

<sup>32</sup> For a good treatment of the issues in this text, see Crawford 1978.

<sup>33</sup> See e.g. Verhoogt 1998: 61–2 on the relationship between the village scribe Menches and Dorion, a high-ranking official in Alexandria. Verhoogt speculates that economic interests of Dorion may lie behind the relationship.

<sup>34</sup> Verhoogt 1998: 101–3. Egyptian priests were also required to meet annually to the capital. How often this took place in practice is unknown.

<sup>35</sup> Good summaries of Ptolemaic activity by Burstein 1993; Hölbl 2001: 55–8; and Török 1997.



particularly Psammetichus II whose campaign was famously recorded in a graffito at Abu Simbel (593 BC), were active in the area.<sup>36</sup> Persian interest in the region was less successful but no less real. It is difficult to decide whether Ptolemy I's campaign in Lower Nubia c. 319/318 BC recorded in the Satrap Stela (Ritner 2003: 393 n. 4) was real, or represents a traditional Pharaonic claim to parallel campaigns in Asia and Nubia.<sup>37</sup>

With Ptolemy II's reign we are on much firmer ground, aided of course by a much richer documentary base. It does seem that in his Nubian campaign c. 275/4 BC this king reasserted Egyptian control of the area, which was vital for control of the gold mining regions in the Wadi Allaqi and for the supply of elephants and luxury goods.<sup>38</sup> In the wake of this campaign, Ptolemy established a 'small world' network that re-linked what we might call the Egypto-Nubian 'interaction sphere' via new Ptolemaic nodes.<sup>39</sup> A network of roads and settlements was built (Gates-Foster 2006), or in some cases rebuilt, that connected the southern Nile valley to the Red Sea coast from Berenike south to Ptolemais 'of the Hunts' (see below) and thence to Memphis, the place of the stables of the elephants (Scullard 1974: 133). Not since the heady days of the New Kingdom empire had Egyptian influence extended as far south into Africa, and this is one among a number of reasons why, I think, the New Kingdom pharaonic ideology of empire was so prevalent in the Ptolemaic period.<sup>40</sup>

The Nubian campaign of Ptolemy II in the 270s BC, as already noted, established contacts for the development of the supply of elephants. The sixth-century traveller Cosmas records Ptolemy II and III's elephant hunting activity along the Red Sea coast:

The great king, Ptolemy III, son of king Ptolemy and of Queen Arsinoe, the gods Adelphoi . . . marched out into Asia with infantry and cavalry forces and a fleet and elephants—Troglodytic and Aithiopian—which

<sup>36</sup> The literature discussing the relationship of Egypt with Nubia is vast. *Inter al.* see: Hofmann 1975; Trigger 1976; Adams 1984; O'Connor 1993; Wilding 1997; Bonnet and Valbelle 2006. Campaign of Psammetichus II: Hdt. 2.161, Bonnet and Valbelle 2006: 164–71. The graffito is published conveniently in Eide et al. 1994–2000: 1. 42 (= ML 7). The comments in Eide et al. 1994–2000: 1. 282–9 are valuable. For Persian involvement, see Burstein 1995.

<sup>37</sup> Cf. the note in Eide et al. 1994–2000: 2. 537.

<sup>38</sup> This campaign is not directly documented but can be inferred from its aftermath. See Agatharchides fr. 20; Diod. Sic. I.37.5; Burstein 1993: 42 and 2008. Burstein 2008: 138 argues that the campaign was treated in the now lost first book of Agatharchides, *On the Erythraean Sea*. Török 1997: 395 n. 284 dates the campaign to 274 BC on the basis of Theocritus, *Id.* 17.87. Cf. Hunter 2003: 165.

<sup>39</sup> I borrow the term from the analysis of the 'Hopewell Interaction Sphere' of North American archaeologists. See Seeman 1979. On 'small worlds', i.e. social connectivity via a small set of connections, see Watts 1999.

<sup>40</sup> I discuss this in more detail in Manning 2010.

his father and he first hunted in these countries,  
and, having brought them back to Egypt, trained them  
for military use.<sup>41</sup>

The inscription stresses two regions for Ptolemaic elephant hunting, one coastal, the other more inland in the heart of Meroe. As Scullard (1974: 134) suggests, this must imply local involvement and cooperation between Ptolemaic agents and local elephant hunters.

The kingdom of Meroë (especially the Dodekaschoinos, the Nile region between Aswan and Dakke), the gold mining regions to the east, and the Red Sea coast were particularly important. That relationship was not always friendly. The Hellenistic interest in a wider world joined warfare in generating demand for a supply of war elephants from the east African interior.<sup>42</sup> Ptolemaic elephant hunting, known in the main from the third century BC before the great Theban revolt broke out in 207 BC, was one of the most impressive efforts of the state, rivalling the development of Alexandria and the Fayum, that extended Ptolemaic influence far beyond the nominal borders of its empire, and brought a much deeper knowledge of the African interior to the Greek world.

In contrast to the intensive nature of these two other projects, elephant hunting was the result of an extensive network formed within the state hierarchy. The Ptolemies must have taken advantage of a pre-existing network of traders and traffic along these routes. War elephants were perceived to be vital to Ptolemaic success, and indeed became one of the most extensively documented contemporary symbols throughout the Hellenistic period, appearing even in the form of lamps at recent archaeological excavations at Vani in ancient Colchis east of the Black Sea.<sup>43</sup> This enterprise is a good example of the 'extensive power', i.e. the ability to mobilize 'large numbers over large distances for minimal co-operation' (Crone 2003: 57), of the Ptolemaic state.

The hunting of elephants was not the only interest in this part of the world for the early Ptolemies. Other exotic animals, including birds for the royal zoo, and commodities such as ivory, were equally important, as their display in Ptolemy II's *pompē* famously described by Kallixeinon informs us.<sup>44</sup> The immediate need to respond to Seleukid military pressure created employment for many and secondary demand in several areas: major ship building with special craft for the animals, building of new settlements, food and water supply for animals and men, and so on.

<sup>41</sup> OGIS 54, tr. Burstein (1985: no. 99).

<sup>42</sup> For recent discussion of Ptolemaic elephant hunting activity, see Casson 1993; Burstein 2008.

<sup>43</sup> See Kacharava and Kvirkvelia 2008.

<sup>44</sup> Thompson 2000.

While the Ptolemies may have bred some Indian elephants in captivity (Charles 2007), they also sought a closer source. The species which the Ptolemies hunted is generally thought to have been the smaller African variety of forest elephant, although it has been argued recently that even as late as Raphia the Ptolemaic army deployed Indian elephants as well.<sup>45</sup> The supply chain with the south linked Ptolemaic explorers, elephant hunters, paymasters, elephant drivers, hunting expeditionary forces, desert guards, new settlements on the Red Sea, and ports in the Nile valley to stables in Memphis and the military high command in the capital.<sup>46</sup> The postal service was a vital link, picking up and delivering communications between the capital and the various officials involved. The expedition and supply network that was established ran along two lines, one maritime along the Red Sea coast to the newly built port at Berenike and then inland to Coptos primarily, and the other Nilotic. The two routes seemingly served as a hedge against the risk of one of the routes being disrupted (Desanges 1970: 44). The main area of activity was the Red Sea coastal region, since the elephant supply route along the Nile lay above the Fifth Cataract, too remote and too difficult an area to make it cost effective (Burstein 2008: 142). Eventually the route from Berenike inland to Coptos, and perhaps to Edfu as well, was preferred. Sailing north of Berenike in the Red Sea was often dangerous, with strong winds from the north and shallow reefs.<sup>47</sup> Neither of these supply networks were permanent, and they were really only active in the third century BC.

The network was a specialized and costly one, involving considerable capital to support exploration and capture, transport and the care of the animal. As with so much else in the Ptolemaic state reformation, Ptolemy II was the protagonist. He re-established the canal out to the Red Sea via the Wadi Tumilat and Pithom (Heroopolis) east of Bubastis in the eastern Delta and created a chain of stations south along the Red Sea coast down to the end of the Arabian peninsula and along the Gulf of Aden. This chain included the key centre for elephant transit traffic at Ptolemais Therôn, 'Ptolemais of the Hunts', founded by Eumedes.<sup>48</sup> An extensive network of roads in the eastern desert was also

<sup>45</sup> On this point see Charles 2007, who also stresses, against earlier opinion, that Indian elephants do reproduce in captivity when well cared for.

<sup>46</sup> Préaux 34–7, discussing *WChr.* 452 (224 BC) and *pEleph.* 28 (223 BC), rightly emphasized the cost of hunting elephants. On Ptolemaic activities, see Fraser 1972: 178–84; Desanges 1970: 32. On the troops used to secure the desert roads, see Hennig 2003.

<sup>47</sup> The dangers of the northern Red Sea may perhaps already be known to the author of the ancient story *The Shipwrecked Sailor*, written just after 2000 BC and anticipating Agatharchides' account of the dangers by nearly two millennia. The large serpent in the Egyptian story may also find an echo in Diod. Sic. 3.36.3–5; 37.7–8.

<sup>48</sup> Pithom Stela (*Urk.* II.81–105), most recently treated by Mueller 2006: App. 2. On the role of Ptolemy II, see most recently Thompson 2008 and Burstein 2008.

built to link the new port at Berenike to the Nile valley. There were other explorers, some of whom wrote memoirs, which indicate that part of the network creation by the early Ptolemaic kings was the result of a combination of the sheer pluck of individual men and state demand.<sup>49</sup>

Up to 270 Ptolemaic settlements or harbours are known along the Red Sea coast from the Gulf of Suez to Bab el-Mandeb (Hölbl 2001: 56). Ptolemy II's expansion into the western and eastern desert and the Red Sea coast also shows that southern Egypt and the roads out to the coast, as through the oases in the west, were vital to the interests of the early Ptolemaic state. Just as Ptolemy I's expansion west of Cyrenaica was concerned with caravan trade flows (Hölbl 2001: 18), so too the control of trade flows in the south preoccupied the early Ptolemies. Ptolemaic state expansion was impressive, and the trade networks that were developed linking Alexandria to transit points in the oases and the Nile valley are a striking feature of the third century BC. The distance between Alexandria and the port of Berenike on the southern Egyptian Red Sea coast alone is well over 1,000 km, while the elephant hunting grounds lay well south of Berenike.<sup>50</sup> Documents concerning the elephant supply line suggest that Memphis, the end point of the supply line, was linked to the east African hunting grounds by a series of nodes in between. The Herakleopolite nome, for example, an important area of Ptolemaic military settlement, is implicated in the elephant transit traffic. The intermediate stopping points on the route no doubt tracked the well-established posts along the Nile.<sup>51</sup> It was also through these posts that the state postal system no doubt ran.<sup>52</sup>

Historically, Egyptian kings had many interests in the Sudanese Nile valley. But for Ptolemy II, war elephants, of which he was in sore need to counter the Seleukid Indian elephants, were perhaps uppermost on his mind, although we should not discount other additional interests in this region, including exploration for exploration's sake (Török 1997: 426; Mueller 2006: 152–7).<sup>53</sup> Ptolemy III and IV continued to send out explorers south into the elephant hunting grounds to obtain them, and Ptolemy IV may have extended further south the network, now under the charge of two *stratēgoi*. A good deal of elephant hunting activity is recorded in his reign. A papyrus dated just before

<sup>49</sup> On these explorers, see briefly Burstein 2008: 137.

<sup>50</sup> See the map of the elephant hunting regions in Scullard 1974: 129.

<sup>51</sup> BGU X 1913; Salmenkivi 2008: 187.

<sup>52</sup> See the brief analysis by Llewelyn 1994: 5–13.

<sup>53</sup> Ptolemaic activities in Meroë are summarized by Burstein 1993, who emphasizes the impact of Ptolemaic presence there. On war elephants, see Fraser 1972: 177–84; Scullard 1974; Desanges 1970; Charles 2007. For the elephant hunting stations along the Red Sea coast, see the map in Scullard 1974: 129.

the Battle of Raphia provides important details (and the high cost) of the funding of the elephant hunt:

Mnesarchos to Antipatros, greetings. We have instructed Paniskos, to pay from the royal bank in Arsinoe<sup>54</sup> Demetrius, Secretary of elephant hunters, through Andronikos. For the 231 men in the charge of Peitholaos wages from Artemesios to Panemos, three months 2 Talents, 1860 drachmae. Subtracting the advance payment for the month of Artemesios made to the advance guard, 60 drachmae, a balance of 2 Talents, 1800 drachmae. Carry this out therefore as has been written. Farewell. Year 25 Thoth 21. To Apollonides. Carry this out as has been written. Farewell. Year 25 Thoth 21.<sup>55</sup>

The letter, which obviously went through several hands, shows us (some of) the cost of elephant hunting, the number of personnel involved in an expedition (including a paymaster and a secretary of the hunt), and part of the loose network of state agents linked by correspondence as well as new royal foundations such as Arsinoe and the coastal hunting stations. The Elephantine text is invaluable in listing some of the officials involved, and in suggesting some of the labour costs for such expeditions. Calculating the average Ptolemaic wage in wheat as the equivalent of 2 obols/day or 120 dr/year, the figure of 2 talents, 1,860 dr would yield, assuming 1 talent = 6,000 dr, 13,860 dr for the three months' wages, or 55,440 dr/yr. That is a wage level sufficient to support 462 men for one year, or, given the number of men in the text, something like at least twice the average wage labour at prevailing rates.<sup>56</sup>

The interest in elephants, which appears to have come to an end by the middle of the second century BC (Török 1997: 431) led to a wider trading network in the later second and first centuries BC with the discovery of the monsoon, but we should remember that already Ptolemy II had a great interest in eastern connections as far as India (Fraser 1972: 180–4). Ptolemaic

<sup>54</sup> On Arsinoe near Edfu, see Mueller 2006: 202[18]; the same location, with royal bank into which payment from the auction of land at Edfu, is perhaps also mentioned in *pEleph.* 15. From the name, the place is clearly a new royal foundation of Ptolemy II Philadelphus. In *pHal.* 1, 166–85, we learn that the town is exempt from the billeting of soldiers.

<sup>55</sup> *pEleph.* 28 (= *WChr.* 451, Eide et al. 1996: 121; Edfu, 223 BC). *pHib.* 110 verso, ll. 78–80 (c. 255 BC), an account of a royal post office, refers to a papyrus roll to be delivered to Demetrius, in charge of the elephant hunt in the Thebaid, presumably not 'at Thebes', where Burstein 2008: 143 has the elephants waiting, but Edfu, whence *pEleph.* 28 derives, or Koptos, the main terminus of the desert road from Berenike. Could this be the same Demetrius (or a relative of his?) mentioned in *pEleph.* 28 some 32 years later? Three days later, the postal register (ll. 100–2) notes a certain number of rolls for the king sent from elephant hunting country.

<sup>56</sup> For purposes of calculation I rely on Préaux 1978: 364. The men apparently were required to pay for their own grain on site. See the remarks in Eide et al. 1996: 2. 575.

use of elephants as weapons of war influenced the Napatan kingdom's interest in them also.<sup>57</sup>

## NETWORK THEORY

All societies, ancient and modern, consist of social networks. Although modern network theory, as diverse as it is, has generally been applied to contemporary societies, there are several aspects of it that are relevant and useful for understanding ancient societies and their economies.<sup>58</sup> Research on social networks 'is fundamentally about differential capacities for action, based on the ability to mobilize connections from different domains of economic and social life' (Smith-Doerr and Powell 2005: 396). Social networks have generally been understood as informal, lateral relationships, those that exist within families, including ties of marriage, for example, and 'friendship cliques', but they can also overlap with hierarchies in the case of formal state bureaucracy. They can extend, therefore, horizontally throughout a village, and vertically across village and regional boundaries. Letters from a priest in one temple to another priest elsewhere, for example, imply a regional network of priests, linked by cultic practice, family ties, official function, or in some other way.<sup>59</sup> Very often these networks are not very well documented in the historical evidence, but Ptolemaic Egypt, along with a few other early states, is exceptional in its surviving documentation of such social networks.<sup>60</sup> It is these networks, embedded in local structures like kinship and other ascriptive groups, and their relationships to central authority, that determine the success of any state. It was in the local social networks that important functions, such as record keeping and legitimization of the ruler, were carried out. Social networks also inform us about individual behaviour in areas such as the use of coinage, legal disputes and the like.

Social scientists have generally drawn lines between networks, hierarchies (social structures with authority) and markets. Such a distinction is no longer very useful in studying modern economies. Such distinctions are even harder to draw in ancient economies (Rauch and Hamilton 2001: 1–2). Granovetter's classic study (1992 [1985]) is enough to show that all economic activity is embedded within social networks and that networks 'penetrate' to different degrees in different locations and among different kinds of relationships. This study has done much to dissolve the contrast that Polanyi wanted to draw

<sup>57</sup> On the impact of Ptolemaic culture in the south, see Burstein 1993, Török 1997.

<sup>58</sup> See the overview of network theory by Smith-Doerr and Powell 2005.

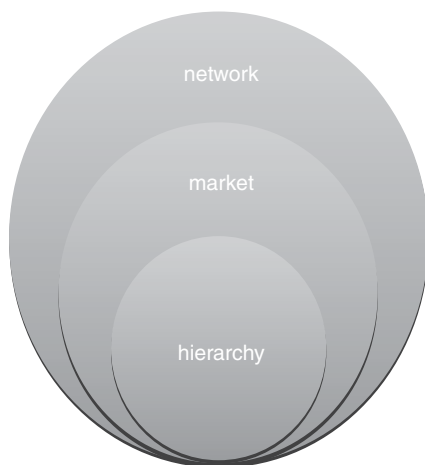
<sup>59</sup> See briefly Martin 1996: 284–7.

<sup>60</sup> See the remarks of Goldstone and Haldon 2009.

between ‘substantive’ ancient and modern market economies. In this line of thinking hierarchies and markets consist of social networks, and we can redraw Figure 14.1 along the lines of Figure 14.4.

Social network analysis is beginning to be used in the discipline of papyrology with profit (Ruffini 2008). Caution is in order because unlike the case with modern network analysis, we cannot often know the extent of an entire social network or its ‘life course,’ how it grew, how long it lasted and so on. Nevertheless this kind of analysis shows great promise, and although more work will need to be done with the Ptolemaic archives, I would suggest that network analysis will prove to be an important tool in understanding both the structure and performance of the Ptolemaic economy, the formation of markets, and the way society evolved. One of the most promising aspects of social network analysis for the study of the ancient worlds is its ability to quantify social ties.

With respect to Ptolemaic Egypt there are several factors to consider. First, the ancient social structure, with very ancient social relationships embedded within local institutions (e.g. temples), families, and inheritance patterns, suggests that at the local level there was (considerable) overlap between the formal state hierarchy, with its vertical linkages, and local, horizontal social networks. The goal of the Ptolemies was to turn these horizontal networks to the advantage of the state, but this was difficult to accomplish. This is one reason why networks matter in economic analysis. Secondly, the formation of new networks allowed the state to extract resources and move them around for its own purposes—war-making, construction projects, public displays of power, and so on. Thirdly, geography. The Ptolemaic state had to assert its



**Fig. 14.4.** Social networks encompassing hierarchies and markets. Taken from Thompson et al. (1991:18).

sovereignty and legitimacy across a large, diverse territory that had, for millennia, been economically organized around locally-organized irrigation basins. And finally, the important element of time. How, to the extent we can ever know, were networks developed, over what period of time, and how did they evolve?

In the case of Ptolemaic elephant hunting, the network extended beyond the territory of the state. Ptolemaic agents on exploratory missions to find, capture and ship war elephants operated with the trans-state networks that were established and grew by Ptolemaic contact with the Meroitic kingdom and local populations. Networks like these were essential in the flow of information between people in a village as well as between local and central state agents. Such was also the case when scribal families functioned within the state hierarchy, or when priests gathered to celebrate the king's birthday. Linkages within networks provided information flow, which in turn is a vital aspect of the movement of goods within an economy, and economic coordination.<sup>61</sup>

## CONCLUSIONS

Here I have only touched on some of the evidence for social networks and the ways in which they are linked both to state authority and to local economies. Papyrologists whose work involves the study of archives have often described social networks in narrative form or in prosopographical lists. Both of these forms of presentation, valuable though they are, tend to give us static or rigid views of society and make it difficult to visualize social relationships, the location of persons within networks and the nature of the connections between nodes in networks. A detailed analysis of corpora such as the Zenon archive, or a more detailed study of the social network which is documented in the Oxyrhynchus texts that I have mentioned, would provide a new and richer understanding of the dynamics of social interaction, the nature and the strength of social ties, and the evolution of the bureaucracy, including the spread in the use of Greek by scribes, and the formation of markets. A careful analysis of Ptolemaic archives would reveal in some detail the relationship of the social ties, weak or strong, and the key nodes in the networks. We do not know yet, for example, where Ptolemy the recluse was located within his economic network. Furthermore, we know neither the relationship between his activity and other market activity in the Serapeion nor whether he was a typical. Network analysis is a potentially exciting tool

<sup>61</sup> Cf. Barkey 1994: 138.



because it can reveal to us the ways in which the Ptolemies established an equilibrium with Egyptian society.

Moreover a more detailed examination of social networks will clarify the variability in identity formation, in access to capital, in behaviour, both good and bad, in the access and use of coinage, and in the creation of markets, in legal disputes, marriage patterns, and in many other areas. While no doubt an incomplete picture would result—we must always bear in mind the fragmentary nature of the papyri—we might hope for a richer socio-economic matrix of the best documented of the Hellenistic states, a state that was being transformed, indeed we might say modernized, under Ptolemaic governance. We are of course at the mercy of incomplete data; population estimates vary wildly, and price data are far from satisfactory. Nevertheless, we can free ourselves of the old substantivist/modernist debate and the static analysis of the structure of the economy by understanding the Ptolemaic economy as a complex and changing set of interactions between state demand and local response. A brief examination of a few documents from the period suggests that we cannot and should not formally separate ‘individual actor’, ‘hierarchy’, and ‘market’, just as we cannot separate ‘subsistence’, ‘command’, and ‘market’ as three stages in economic history. All three were connected and linked in various ways and to varying degrees by social networks. Economic Sociology and New Institutional Economics have made great strides in recent years with respect to historical analysis. With increasingly better archaeological survey work now available, and with social science techniques such as social network analysis brought to bear on the documentary material, there is great hope that the construction of dynamic, more quantified, models of ancient economies are possible.<sup>62</sup> Finally, it seems clear that there are data of considerable interest to several issues central to Economic Sociology, not the least of which are the emergence of markets and the impact of social networks on behaviour.

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<sup>62</sup> Cf. my remarks in Manning 2005.

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## Autopsy of a Crisis: Wealth, Protogenes, and the City of Olbia in c.200 BC

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If we follow M. Rostovtzeff, alone in having dared to write a complete social and economic history of the Hellenistic period, the Greek and Greek-speaking world encountered, from the Classical to the Imperial era, two major crises: one in the fourth century, that was ended by Alexander's conquest, the other in the late Hellenistic period, mostly in the first century BC. Thus the third century fell, according to him, between these two crises and was a time of stability and prosperity, which saw the success of the business classes (the *bourgeoisie*) and a certain kind of capitalism. Of course these bourgeois behaved as *rentiers*, which at least would help to explain among other things the social crises of the second half of the century. But more generally after a period of disruption in the balance between supply and demand in the fourth century, and the troubles brought by the Romans in the second century BC, the third century was a time of business and global enrichment. However, such a reconstruction does not take much account of the inscriptions of the early Hellenistic period which, from mainland Greece to Asia Minor, indicate the difficulties of the cities, especially in terms of finance and what these inscriptions refer to as the lack of liquidity, *aporia tōn chrēmātōn*. The Black Sea and Olbia also figure among such examples, as the well-known decree in honour of the benefactor Protogenes demonstrates.<sup>1</sup> It is this decree that will serve as a starting point for my investigation.

Today, almost seventy years after the publication of the monumental *SEHWW*, the idea of crisis is not enjoying much success in studies of ancient history, because it has too often been associated with 'decline'. L. Robert and his successors have shown all too clearly that decline has been unfairly considered to be a characteristic feature of the post-Classical city: the 'Greek

<sup>1</sup> *IOSPE* I<sup>2</sup>, 32 (*SIG*<sup>3</sup> 495): Side B only in Maier 1959: no. 82; excerpts in *Emprunt* no. 44. English translation and brief commentary, Austin<sup>2</sup> no. 115. I present the text, a bibliographic lemma and a full translation in Müller 2010*b*: DE 21.

city did not die at Chaeronea'.<sup>2</sup> In addition to the problem of 'crisis', euergetism can appear to be a subject that has been fully understood thanks to the major studies of P. Veyne<sup>3</sup> and Ph. Gauthier.<sup>4</sup> But this is not the case, as L. Migeotte has shown in a recent international epigraphy conference:<sup>5</sup> the economic aspects of euergetism still await exploration and, above all, quantification. Of course royal benefactors have been the subject of various studies and syntheses,<sup>6</sup> but the economic role of individuals has often been neglected and obscured by the ethics of their action, the term being understood according to the values of the *polis*. More generally, the circulation of money in Greek cities has for a long time been largely a topic discussed by numismatists only, in spite of the recent emphasis on the meaning and semantics of the terms 'money' and 'coinage'. Indeed, apart from R. Bogaert's study of banking,<sup>7</sup> focusing essentially on the institutional aspect of lending money, studies of the circulation of money are relatively recent<sup>8</sup> and concern above all Classical Athens, where the methods of credit provision were first developed. But perhaps further light can be shed on this subject by looking more closely at situations where money was in short supply, or in other words periods of lack of liquidity, leaving for now on one side the social aspects related to the abolition of debts.

This chapter therefore has a limited aim: to analyse closely the process at work during a crisis where money and its circulation take a demonstrably dominant place, in a city that was certainly on the periphery but whose language and concerns differ little from other polities of the Aegean world. I develop three questions, which are closely linked: can we, from the language of the inscription, distinguish a pattern that could offer a model of a crisis? What are the mechanisms of a financial crisis? Finally, what are the possible reasons for such a crisis? While these questions are addressed in the examination of one particular case study, parallel examples can be introduced to shed light on the similarities of the problems seen elsewhere in the Hellenistic world.

## COUNTING PROTOGENES' EXPENSES

Any answer to these questions requires first and foremost some precision about Protogenes' expenditure. His expenses cannot be easily reconstructed, even though the honorific decree has only a few textual uncertainties.

<sup>2</sup> On this well-trodden theme, see Robert 2007: 603.

<sup>3</sup> Veyne 1976.

<sup>4</sup> Gauthier 1985.

<sup>5</sup> Migeotte 1997.

<sup>6</sup> C.f. e.g. Bringmann and von Steuben 1995 and Bringmann 2001.

<sup>7</sup> Bogaert 1968 (see Abbreviations).

<sup>8</sup> e.g. Cohen 1992, Shipton 2000, Bresson 2005, Gabrielsen 2005, and more recently Chankowski 2008 and Cohen 2008.



Although some passages of the decree that touch on the financial procedures have already been dealt with in some detail by Migeotte,<sup>9</sup> it seems to me that some of his conclusions need further refinement.

The decree honouring Protogenes can be dated to about 200 BC. Different precise dates have been offered, ranging from the 220s to the 180s, on the basis of different criteria (letter forms, prosopography, identification of the 'barbarians' of the text with one or other *ethnos* etc.). I doubt that one can be as precise here as Ju. G. Vinogradov<sup>10</sup> (220–210 BC) or his homonym Ju. A. Vinogradov<sup>11</sup> (who prefers a date before 213 on the basis of the collapse of the Celtic state in Thrace, or even before 216 following the appearance of the Bastarnai in the Danube region). Anyway, this lengthy decree is a sort of 'summary of his career' for an individual who has demonstrated euergetism 'throughout his life' (A 7, διὰ βίου). It refers to successive events, classified here, as so often in this type of inscription, at the same time by chronological layers but also by major areas of activity. In this way the decree recalls similar examples of the late Hellenistic period<sup>12</sup> and even the Roman Imperial era, without the same rhetorical abundance. At best one might say that the actions of Protogenes belong to the last quarter of the third century.

Another preliminary comment is essential. The benefactor has performed these benefactions through private generosity without any other pressure than his wish to act for the public good. But he has also acted as a magistrate, the terms of which are recalled at the end of the document (B 64–5): for three years he acted as someone 'responsible for the common financial administration and for the treasury' (ἐπὶ τε τῆς κοινῆς οἰκονομίας καὶ ταμείας γεινόμενος), which reminds us of the role that Lykourgos held in Athens from 338 to 326 BC. Protogenes has also been a member of the college of Nine (A 38–9), about which we do not know much, and it seems this was the occasion, and not only the year, when he demonstrated once again his generosity (by giving money to fund the local kinglets). Migeotte<sup>13</sup> doubts the coincidence between this role and Protogenes' services when holding this office, but it remains difficult to understand why the decree would mention the charge, whatever its precise duties (finances, foreign affairs?), if there had not been some close relationship between the office and his actions other than the need to date them somehow, something that is not systematically done in the text. In general this text does not always separate public actions, performed by Protogenes acting as a private individual, from those accomplished within the responsibility of an official role. An example is the construction of the

<sup>9</sup> *Emprunt* no. 44.

<sup>10</sup> Vinogradov 1989: 177–227.

<sup>11</sup> Vinogradov 1999: 70–5.

<sup>12</sup> For example, another famous decree, even though from another region: the decree of the city of Akraiphia in Boeotia honouring the local benefactor Epaminondas in the first century AD, *IG VII* 2711. Cf. Müller 1995.

<sup>13</sup> *Emprunt* 138 n. 426.

walls (B 33–4 and 39) for which Protogenes himself launched the auction and then completed the works without apparently having been given an official public role in this matter.<sup>14</sup> Another example concerning public works is where Protogenes made repairs at his own cost (200 staters) to the public boats (*dēmosia ploia*, B 51–4) but presented accounts of his expenses: in other words, he acted in an official capacity (but which?) after having handed over the sum of money to the city. The precise institutional capacity of his actions is sometimes unclear, which in itself is an interesting phenomenon.

Protogenes' expenses on behalf of the city take the two usual forms: gifts and loans. The latter are transformed regularly into gifts when reimbursement is not forthcoming. Our difficulty is to distinguish one form from the other correctly and to recognize that a distinction between the two is not always possible. This can be seen in Table 15.1, where the sums concerned are expressed in *chrysoi*, that is in gold staters.<sup>15</sup>

Migeotte arrives at two totals, which seem to me imprecise: 2,600 staters for the gifts and 4,100 for the loans. He counts among the gifts one sum, which should not be included: the 400 staters (A, line 38) promised as payment to the *Saioi*, which certainly counts only as an advance on the 1,500 subsequently loaned. As for the loans, the total sum suggested (4,100 staters) counts only the loans made in cash, but one can also include quite legitimately the sums given as credit for the sale of grain ( $200 + 895 = 1,095$  staters, supplied in grain, i.e. payment in kind). The latter are not to be distinguished from what we might think otherwise as proper loans, because they function in precisely the same way in the eyes of the Olbiopolitans, thanks to a general equivalence between grain and cash which I will return to later.

One can ask questions of course about the sense that one gives to the verbs that evoke the transfers of money. But the text is very clear in its use of these verbs. Where there is a gift, the verb *didōmi* is used or, in the example of the liberation of the sacred vases, *hyperapodidōmi*. When loans are referred to, the text mentions a promise (*epanggellomai*) or an advance (*prothesin poieō*) and virtually systematically the reimbursements made (or not). Among all the examples, only those instances at A 40 and B 64 are not totally explicit since we have no indication of an eventual reimbursement. The drafter of the decree has not however hesitated to use the word *didōmi* in the sense of 'provide' in the case of the loan of money for the purchase of grain (A 69) or for the advance of grain in kind (A 73), which recalls the use of the verb in the Kyrene stele (Bresson, this volume).<sup>16</sup> But in the case of Olbia, the context leaves no doubt as to the nature of these different operations.

<sup>14</sup> As Maier (1959: 269–70) correctly notes.

<sup>15</sup> One stater is the equivalent of 20 silver drachmai, following the Attic standard.

<sup>16</sup> RO 96; Bresson (this volume) p. 79.

**Table 15.1.** Gifts and loans of Protogenes to the city (staters)

Gifts	Loans or credit given for sales of grain
A13: 400 (for the King Saitapharnes)	A29: 200 (grain: 2,000 medimnoi at the price of one stater for 10 medimnoi) Reimbursed within one year without any interest charged
A18: 100 (the liberation of the sacred vases that had been pawned by the city)	(A38: <i>promise of 400 [for the Saioi]; certainly to be included among the 1,500 in the next entry</i> )
A23: 300 (purchase of wine)	A40: 1,500 (for the kinglets); no mention of reimbursement
A58: 300 (embassy)	A68: 1,000 (purchase of grain) of which 300 without interest for one year; reimbursed in bronze at the rate of 1:400 A72: 120 (grain: 500 medimnoi at one <i>chrysous</i> for 4 medimnoi and 1/6) + <i>c.</i> 775 (2,000 medimnoi at one <i>chrysous</i> for 2 medimnoi 7/12) = <i>c.</i> 895, reimbursed at the end of one year without any interest
A88: 900 (for King Saitapharnes)	B32: 1,500 (walls or an earlier payment concerning the kinglets?) (B34: <i>500 [arrhes for works], without doubt to be included in the next entry</i> ) B42: 1,500 (ramparts); reimbursed in bronze at the rate of 1:400
B54: 200 for the repair of public boats	B64: 100 (curtain walls of the ramparts); no reimbursement mentioned B85: 6,000 (total of the private debts that are owed to him and his father according to the decree)
<b>Total:</b> 2,200 staters	<b>Total:</b> 5,195 (minimal total) or 6,695 for the city of which 1,600 (minimum) were not reimbursed at all and 6,000 for the private debtors, which were not reimbursed.

A final point on the debts owed to Protogenes is necessary. It seems to me that one can only interpret the 6,000 staters mentioned at the end of the text (B 85) as the total sum of the private debts that are owed by individual Olbiopolitans to Protogenes and his father on the loans that they have made. This impressive amount may well have been inherited in part by Protogenes from his father. As a matter of fact, the total owed is mentioned in the middle of a passage about individual debts, for which the person who was officially responsible for overseeing this concern was chiefly Protogenes, himself the main creditor.

In total Protogenes and his father before him therefore spent more than 13,000 staters of gold on their fellow citizens, i.e. a total of 260,000 silver

drachmai (more than 43 talents). Of course this operation extended over several years, but if one estimates that period as forty years (i.e. the period over which two generations of benefactors had operated) the expenditure is still well over one talent per year. Protogenes, moreover, is clearly not the only example in this category: a certain Polykritos of Erythrai<sup>17</sup> in the 270s was also capable of making an advance of 6,000 drachmai at once when his city was struck by food shortage. But what is striking in the case of Protogenes is the cumulative nature of the debts that he is owed. To have been capable of paying out such sums of money without his personal financial reserves being so affected that he was progressively no longer able to perform any other financial operations shows clearly that his fortune was considerably superior. Does this mean, as Veyne suggests, that Protogenes' personal fortune was greater than that of his own city?<sup>18</sup>

## THE OTHER RESOURCES OF THE CITY

As an initial response to this question, one might say that Protogenes was richer than his fellow citizens or rather that he was more generous than they. For others were certainly making loans to the city too and thereby providing resources, but they were also demanding reimbursement without any delay. This type of demand is displayed clearly in the first sale of grain on credit, when Protogenes was the only individual not to have immediately recalled the debts owed (A 30). Ph. Gauthier<sup>19</sup> has pointed out that these subtle references to such payments serve to highlight Protogenes' actions, but mostly demonstrate that the supposed financial weakness of the city might in fact be something of a mirage: without any liquidity, it would have been unable to pay back its benefactors. This argument is not altogether convincing, because we do not know the total of the other debts that were recalled. Moreover, in the second case where there is an issue about the reimbursements (A 77), these in fact are repaid thanks to money provided by Protogenes! For the suppliers of grain are paid straight away from the 1,000 staters supplied by Protogenes for the *sitōnia*. If we were to try and translate this behaviour into economic terms, which might otherwise seem rather anti-social in a structure such as the Greek *polis*, it seems to suggest that the lenders had made an investment: how many loans are we not made aware of, because they were simply repaid under normal conditions and so are not mentioned? Ultimately we only learn about the exceptional examples, in other words those instances that turned out to be cases of euergetism: these definitely represented the moral standard

<sup>17</sup> I refer to the text and its translation in Bielman no. 21.

<sup>18</sup> Veyne 1976: 235.

<sup>19</sup> Gauthier 1985: 70–2.

of Greek society, but probably not their economic one. The most extraordinary example of 'anti-euergetic' behaviour in the Hellenistic world is surely that of Nikareta of Thespias in 223 BC,<sup>20</sup> who had lent large sums of money to the city of Orchomenos and never renounced her claim to the reimbursement of these sums. The inscription that refers to this operation is obviously *not* an honorific decree but is instead a long series of financial documents designed to show to posterity that the city could indeed pay off its debts. At least in this case Nikareta, even though a Boeotian, was a foreigner in Orchomenos.

Another source of liquidity that the city of Olbia was able to access at the end of the third century BC was the property of the gods. The Olbiopolitans had pawned sacred vases, *ta hiera potēria*, as a security for the loans with a foreigner called Polycharmos.<sup>21</sup> In return he had advanced the city 100 staters and was about to take the sacred vessels and turn them into coin, because the city had not been able to pay Polycharmos the cash sum they owed him for the loan.<sup>22</sup> Although the distinction between public and sacred property has been the subject of a complex debate that has still to be resolved, it is possible to conclude that civic magistrates could not commit the wealth of the gods without real constraint. The restoration of the property of the gods is obligatory because it is impossible to harm the gods. It is this point that becomes clear from the documents that L. Migeotte has recently studied.<sup>23</sup> So, during the 260s when the people of Samos took grain from the reserves of Hera in the territory of Anaitis, they pay at what one might call a rock-bottom rate of 5 drachmai and 2 obols per *medimnos*.<sup>24</sup> In the case of Olbia, it is well worth noting that the god (Apollo *Ietros*?)<sup>25</sup> was no more able than the public purse to make cash available, as magistrates were pawning material commodities themselves made of precious metals. One can imagine that these vessels were offerings and that they were in gold, since Polycharmos was ready to take the vases to the moneyer, who would have been able to melt them down and transform them into coins, i.e. golden staters. In this respect, I am not sure that it is legitimate to conclude that the creditor, Polycharmos, 'demanded a kind of forced coinage'.<sup>26</sup> If Polycharmos made such a demand, it must have been legal and also included in the conditions of the loan. In addition, one might suppose that the intrinsic value of the vases was (considerably?) superior to the sum of money that was in fact raised by the loan on the vessels. This amount of money is nevertheless rather inconsequential if we compare it with the sums of

<sup>20</sup> *Emprunt* no. 13. Cf. Müller 2010a.

<sup>21</sup> On Polycharmos, cf. Bogaert 125, who is right to think that he is not a banker in the technical sense of the term.

<sup>22</sup> Howgego 1995: 33–4.

<sup>23</sup> Migeotte 2006: 237.

<sup>24</sup> *IG XII* 6, 172, lines 26–7 (Samos, c.260: see n. 53 below).

<sup>25</sup> On this god, see Vinogradov and Kryzhic'kij 1995: 109–11.

<sup>26</sup> *Emprunt* 137 n. 414.

money that were made as gifts or as euergetic loans or were necessary to meet the eventual needs of the city. There are only two explanations that can meet these facts: either the god is rich but the city does not dare to encroach more on the sacred monies; or the god is not that rich, so that city could not borrow more. The use of the definite article *ta* before *hiera potēria* suggests an *a priori* total figure for the vases that had been put up as security, which would corroborate the second hypothesis.

The last source of revenues mentioned in the text is the product of taxation: it appears in two places in the text (A 41 and 50–1), concerning respectively the returns that can be expected in the future and the farmers of taxes (the *telōnai*), who hold on to the money they owe the State. The precise nature of these taxes (*telē*) is not given, but we know from other documents that they were very varied, but were also an essential component among the city's public revenues.<sup>27</sup> The interest of the Protogenes decree is in fact its demonstration of a system on the brink of collapse: the public purse is empty first and foremost because the tax revenues have not come in, regardless of whether or not this was the fault of the *telōnai*. However the city of Olbia was, in theory, able to exploit resources of real potential: it enjoyed a location on the edge of the Dnepr *liman*, which was capable of providing important harbour dues, and a vast and fertile territory, whose produce could be taxed in normal times on production or the commerce related to production, or both.<sup>28</sup> And the basic idea of guaranteeing one of the loans made by Protogenes on the basis of 'the revenues to come' shows the confidence of the citizens in the system, though the clause seems mostly designed to convince the benefactor. But the obvious economic potential of Olbia does not allow it to avoid the crisis because the problem is largely to be located elsewhere.

## WHAT MODEL FOR THIS CRISIS?

The crucial question is the interpretation of this crisis and of the precise identification of its components. The first difficulty however is to know whether this term, 'crisis', is a legitimate one. Some historians such as Ph. Gauthier and L. Migeotte have tended to minimize the socio-economic difficulties of the period in general and at Olbia in particular. They pursue a double historiographic trajectory by joining the ideas of M. Finley with those of L. Robert. Gauthier, for instance says that the 'the financial distress of Olbia cannot be denied' but also that the 'overall total of the sums [furnished by Protogenes] without doubt represented only a small amount when compared

<sup>27</sup> See most recently Chankowski 2007a.

<sup>28</sup> On the territory and its productive capacity, see Müller 2010b: ch. 6.

to the annual total of public revenues in Olbia'.<sup>29</sup> He suggests that Protogenes' actions anticipate those typical of men in the late Hellenistic period, though the benefactor or benefactors 'are not above the laws of the city; as magistrates they are elected and provide accounts at the end of their office'. The perspective here is very clear: we can see how the approach slips from the financial aspect (there is no money in the public purse) to the institutional one (the city controls the notables and not vice versa). There is a possible interconnection between cause and effect: the lack of money sees the city turn to benefactors, and this ends up producing a regime controlled by notables, *grosso modo* the reconstruction offered by P. Veyne.<sup>30</sup> But the problem is that the two essential points (financial crisis and institutional crisis) are not intrinsically linked. Furthermore the recognition of the stability and the efficiency of the institutions at Olbia in the Hellenistic era, which no one suggests is in any doubt, does not mean that the financial and/or economic problem disappears. It is necessary to disentangle the crisis and thereby admit its autonomy, something that primitivists would never have allowed. It is therefore perfectly legitimate to recognize simultaneously both Protogenes' submission to the laws of the city<sup>31</sup> and the reality of the crisis. This does not prevent us from considering what social implications can be seen,<sup>32</sup> but this is a different historical question.

Migeotte, in his turn, has wanted to show how what appears to us today in the Protogenes decree and in other documents as the symptoms of a permanent crisis (resorting to loans, to subscriptions, to benefactors, etc.) was really a normal way of operating. So 'rather than pretending, as is often done, that the cities were constantly on the point of bankruptcy, it seems to me right to conclude that they had integrated these exceptional practices within their sphere of needs and their dealing with the unexpected'.<sup>33</sup> The vision that this view of such difficulties produces is, if not a peaceful one, then at least one that is more moderate. One ends up wondering how far such problems were rhetorical constructions peculiar to honorific decrees. Migeotte was surely right to insist on the fact that turning to such exceptional methods (as they are judged as such today) was *not* a sign of crisis. Subscriptions took place in times of peace, and the demands made of benefactors suggest the social cohesion of the community and the city's confidence (*pistis*) in their reaction to such appeals. But these solutions do not obliterate the existence of the symptoms.

<sup>29</sup> Gauthier 1985: 71.

<sup>30</sup> Veyne 1976: 235–6.

<sup>31</sup> Even if the mention of the rendering of accounts (which is simply a normal process) casts doubt on the fact that this was systematically applied by the others.

<sup>32</sup> As Chandezon (2000: 233) reminds us in relation to crises and war: 'La crise est un phénomène qu'il faut considérer comme inclus dans un cadre social et politique.'

<sup>33</sup> Migeotte 2002: 22.

If we were to try and classify such symptoms, we find that the texts themselves describe them and offer the following triptych: war (*polemos*), food shortage (*sitodeia*), and the lack of money (*aporia tōn chrēmatōn*). It is within this tertiary sequence that the benefactor exercises his talents: in external affairs (missions to mediate problems, embassies, military missions), situations where food is in short supply, and shortfalls in the money supply. This sequence is a common feature of numerous honorific decrees in the third century BC. One thinks of the decrees at Athens honouring Philippiades in 283/2<sup>34</sup> or at Erythrai honouring Polykritos after 278/7.<sup>35</sup> One might also cite the decree of Samos honouring Boulagoras in 243/2 BC, where the honorand has served as an intermediary for his fellow citizens with Antiochos Hierax and where through the considerable sums of money that he spent by different methods (advances of money, loans made without interest, loans transformed into gifts etc.), he allowed the city to buy grain and provide for a large number of expenses.<sup>36</sup>

The lexical and syntactical expression of these three problems varies, of course, and the three difficulties do not necessarily function at the same level: food shortage and the lack of money are a common pair and are generally unchanging as such in honorific decrees from the early Hellenistic period onwards, when these terms seem to be attached to each other, while war is first and foremost the variable that allows one to explain the situation for their presence. However, despite the fact that these three problems recur simultaneously, only food shortage has really been studied in any depth by historians<sup>37</sup> on the basis that grain crises (and it is an undeniable observation) were the foremost concern of societies that were struggling to feed their population. We know that the Greeks, like the Romans, did not lack terms to describe this fundamental trouble: food shortage can be described<sup>38</sup> as *spanis sitou*, *limos*, or *endeia*, and reasons for such shortages betray some semantic similarities such as the failure of harvests (*aphoria tōn karpōn*). But the failure of money (*aporia tōn chrēmatōn*) has attracted far less attention, no doubt because of the widespread primitivist approach which tended not to recognize the fundamental importance of the circulation of money in ancient Greek economies. In reality, poor harvest or failure of the harvest are not in themselves sufficient to create a crisis: what is needed for that is in addition the absence of money, because without money the city is unable to alleviate its own insufficient supply of food by turning to the external market. In this respect, the so called 'Kyrene stele'<sup>39</sup> which dates to the end of the fourth century offers important

<sup>34</sup> IG II<sup>2</sup> 657 (Syll<sup>3</sup>, 374; Bielman no. 20; Austin<sup>2</sup> no. 54).

<sup>35</sup> Bielman no. 21.

<sup>36</sup> IG XII 6, 11 (also Pouilloux 2003 [1960]: no. 3; Austin<sup>2</sup> no. 132; extracts *Emprunt* no. 67).

<sup>37</sup> So Garnsey 1988, who never speaks of money.

<sup>38</sup> Garnsey 1988: 18–20, 'the language of food-crisis'.

<sup>39</sup> RO no. 96; Bresson, this volume.



lessons, because we see a city supplying grain for the Aegean markets by the sale (not gift) of grain in a context where harvests have been poor, but where the supply of cash is not so problematic.

In the case of Olbia, a first interesting feature of Protogenes' intervention is that he can assure the city of its capacity to supply food from the regional markets, or even international markets, which in any case go far beyond the level of the *polis*. The benefactor has been considered *a priori* as the owner of a 'large landed territory', because he also supplied grain. But how were his personal estates not affected by the failure of the harvests? It is possible of course, and even very likely, that in fact Protogenes was such a large landowner. But, under the present circumstances, the countryside (*chōra*) was occupied and devastated by various hostile invaders (*ethnē*): in such a situation the supply of food can only have been made by sea, via the Aegean markets. Polybios himself recalls how at Byzantion in the 220s, i.e. a time that corresponds precisely to that of Protogenes' activity, the coastal regions of the Black Sea were sometimes not only exporters but also importers of grain.<sup>40</sup> Olbia offers a perfect illustration of such a situation, though a scenario like this should not be applied to earlier periods<sup>41</sup> as evidence that the production capacity of the northern Black Sea region has been overestimated for the classical period. Polybios' evidence is surely relevant for the third century BC, not least for the 220s themselves, because of the mention of the Gauls in the text who settled on the territory, if only better to apply pressure on the *polis*.

A second important element: relations with the surrounding barbarians seem to have been an essential factor. But it is necessary to distinguish between those who demand tribute and those who attack the territory. Here, rather than being concerned with the possible ethnic identity of these peoples, a question that has attracted an excessive amount of attention,<sup>42</sup> we might consider their behaviour. The first are the *ethnē* collectively referred to by the name *Saioi* who occupy a large part of the clauses on side A of the inscription. The text also describes them as 'kinglets' (*skeptouchoi*) of whom a certain Saitapharnes has to be flattered and treated with some considerable attention (*therapeuein*). The attackers are themselves referred to on side B by various names (Celts or Galatians, *Skiroi*, *Thisamatai*, Scythians, and *Saudaratai*), among which the Galatians must carry off the prize for displaying the greatest cruelty because even the others are fearful of them. Against such forces the only solution is a military one and requires that the walls be restored to a functionally defensible condition. The two instances here are totally different. The payment of tribute is an operation that Greek cities viewed with some distaste, but nevertheless the numerous communities who were

<sup>40</sup> Polyb. 4.38.5.

<sup>41</sup> As Tsatskheladze 2008: 50 and 56–7 does once again, where all periods are mixed up.

<sup>42</sup> On the ethnonyms and their classification in the decree for Protogenes, see Müller 2009.

required in the Classical and Hellenistic eras to hand over such payments is considerable: here one thinks of the *poleis* of Asia Minor who passed successively from Persian domination to the Athenian Empire and then to the Seleukid Kingdom. But tributary relations, violent perhaps on a symbolic level, do not *per se* incorporate physical violence, because the kings have an interest in preserving the security and wellbeing of those who are a significant source of royal revenue. In exchange for tribute, the kings provide a level of protection that nurtures prosperity. This relationship has all the hallmarks of a negotiation and therefore implies a fundamental rhetorical dimension. The tributary mechanisms are often very sophisticated indeed, as we can see for example in Asia Minor at Herakleia Latmos, where between 196 and 193 BC<sup>43</sup> Antiochos III relieved the city of a series of taxes so that the community should not totally decline. Royal benefaction has here an economic perspective and does not last forever, as the tribute payments will be restored when the city once again has the means to pay them. The Olbian version of such a situation is less peaceful: but so long as the city has revenues, the tribute payments to the kinglets (*skeptouchoi*) are not in themselves a major problem. The text of Side A of the Protogenes inscription indicates no cause-and-effect relationship between the presence of the *Saioi* and the episodes of food shortage. However, the attacks of the other *ethnē* are directly responsible for the shortage (B 80–2) as well as for demographic losses, as the text clearly identifies (B 14–21), and so for the crisis in its most acute aspects. The protection that the tribute payments were meant to secure did not function on this occasion, either because the *Saioi* had for that time disappeared from the stage or because they too were powerless in the face of the Galatians/Celts. The city of Olbia occupies a position in the northern Black Sea region which until Mithridates VI lay largely outside the sphere of influence of the Hellenistic kings. That made any appeal to these powers almost certainly futile.

## THE CIRCULATION OF CASH/MONEY

Of the three components of the Olbian crisis, the crucial one is definitely the absence of cash, a crisis of liquidity: but here still one must not be mistaken about this issue. Ph. Gauthier thought that Olbia's difficulties came from the lack of 'réserves'.<sup>44</sup> However one does not necessarily expect a Greek city to enjoy the comfort of 'réserves', nor that their very absence should be a problem: it was the sanctuaries that were likely to hold and deploy their stores of moneyed or

<sup>43</sup> See the text of the letter of Zeuxis to the Heracleots in Ma, Appendix nos. 31, II, III, and IV.

<sup>44</sup> Gauthier 1985: 70: 'la cité d'Olbia . . . semble moins manquer de ressources et de revenus que de réserves.'

uncoined metal and so exercise their potentially liquid assets, as one sees in the example of Polycharmos and the sacred vases. A city that has no empire or military power, such as was enjoyed by Classical Athens or Hellenistic Rhodes for example, has not the capacity to exploit others financially, and so is limited in its ability to build up reserves. However, communities of this kind have to balance expenditures and revenues carefully, a common concern according to Migeotte.<sup>45</sup> The difficulties arise *not* when the city no longer has any reserves but when it is in deficit: and such a scenario revolves around the circulation of money.

The decree honouring Protogenes is therefore an excellent example of what we might call 'the disruption of cash flow'. The nodal element of this crisis which blocks all other operations remains the inability to realize the tax revenues because the *telōnai* appear to have retained the money they should have handed over to the magistrates (A 49–51). We can imagine that those who farmed the taxes were not likely to be forthcoming about paying the due money to the city. However the primary reason for their not having paid what was owed is most likely to have been their own inability to collect from individuals the taxes that they had undertaken to raise. The clemency displayed by Protogenes to the tax farmers at the end of the decree (B 66–7) when he was in charge of the oversight of financial affairs is symptomatic of this situation: the tax farmers were not charged with the responsibility for the situation, though the money could have been recovered from their own property. No, in fact the origin of this particular problem resides far more in the general lack of liquidity in the wider population which has paralysed the financial potential of individuals: these are just as in debt as the city is to Protogenes and other financiers (Side B, line 88).

The non-collection of taxes has, in its turn, massive repercussions on the payment of tribute. Tribute payment depends on a sophisticated process that is described in length in the decree (A 45–58). The journey to the royal residence has also been farmed out, and the city itself owes, by decree, 300 *chrysoi* to the contractor of the tax: the operation has been cancelled on two occasions because of the lack of money resulting from the failure to collect other taxes. The farming out only succeeded at the third attempt (performed by Phormion) and thanks to the intervention of Protogenes.

The first point that needs to be clarified in this context is that the tax farmers (*telōnai*) who fail to hand over the taxes due are not the same as those who, one after the other, act as purchasers of the *stolos* tax. The latter do not hand over money but take responsibility, at least partially, for the costs of the embassy. A second issue is that the reference to the 300 *chrysoi* that the city must pay to the

<sup>45</sup> Migeotte 2002: 14.

tax *telonēs*-cum-ambassador looks in itself unusual. I would exclude that the sum involved was destined as a payment to the kinglets themselves for two reasons. First, the payments made to the *skeptouchoi* are always identified precisely as just that, and secondly, even if the act of drafting and passing a decree about the embassy demonstrates that the city is appropriating the event on an institutional level, it remains difficult to see why the citizens would vote about a non-negotiable (or in any case previously negotiated) tribute payment. In fact the sum of 300 *chrysoi* is more than likely to be for the ambassador himself: one must think of this more as an advance to be reimbursed, or as an all-inclusive payment made for a mission that was not without danger. It is worth asking why rich Olbiopolitans would take it upon themselves to farm out this diplomatic mission. It is likely that to establish privileged relations with the kinglets could have had beneficial personal economic consequences for those who contributed to such diplomatic activities. It is not irrelevant therefore to see that Protogenes was, at one stage, responsible for another of these embassies (A 89–93) and to observe, on the other hand, that he was also one of the few to have access to supplies of grain wherever they came from.

Another complex operation requiring the spending of funds that were in short supply or absent was the responsibility for the auction of the construction of the walls.<sup>46</sup> The city, once the contractors had been designated, was required to make a down payment to establish the construction project (B 32–7). Once again it is Protogenes who pays the 500 *chrysoi* that are required to meet this payment, and thanks to it ‘the contractors have started to make payments against the sum at their disposal’: in other words the contractors have been able to start making payments for the building costs and for salaries.

Overall one can see that Protogenes’ action injects the financial liquidity into the system, which could otherwise not function. The description of this process is precisely the same when Protogenes makes payments in money or in grain, because in this text we see, as in so many others, that there is a full equivalence between these two commodities. The idea here is not to come back to any interpretation in terms of barter, nor of any primitive form of exchange in kind. The text, which speaks only of money and of the circulation of coins, precludes any kind of argument of that form. It is enough to state that grain equals money, because it can be resold at any time and, in turn, so become a further source of liquidity (see also Criscuolo, this volume). Furthermore, the means of payment in kind and in money can be interlinked: the one can ride piggyback on the other without any linear association between them; likewise the loans and sales of grain on credit function identically. It is useful here to cite the example that Polybios<sup>47</sup> describes in the wake of the

<sup>46</sup> Cf. Maier 1959: 269–70.

<sup>47</sup> Polyb. 5.88–90.

earthquake at Rhodes in 227 BC, when the Hellenistic kings compete in a game of generosity motivated largely by economic interests. The royal gifts offered to the Rhodians are made in kind and in money, but among the gifts in kind it is necessary to distinguish those that have a direct use for the restoration of the fleet, namely wood, cloth, pitch, etc., from gifts of grain (from Egypt for example) that can be used for resale.

## POSSIBLE REASONS FOR A CHRONIC DEFICIT

The fundamental question that underlies this chapter is ultimately whether we can identify the short term and/or structural reasons for a chronic deficit, such as that which the Protogenes decree indicates. Moreover, it is important to establish whether this kind of crisis was characteristic of Hellenistic economies. First of all we can dismiss straightaway the idea of monetary crisis that has been so often suggested by Russian historians<sup>48</sup> and numismatists of the northern Black Sea in the third century BC. Of course, the striking of a gold coinage stopped in Olbia at the start of the third century BC. The silver emissions that followed (300–250 BC) suffered from reduced quality of the precious metal content and the instability of the weight of the drachma. Silver coinage subsequently ceased to be struck and instead bronze coinage alone was issued. But we know that, starting from the years 280–270 BC, not only this region, but also the whole of the Greek world, experienced a reduction in monetary emissions. If we turn to the Protogenes decree we find that silver is not mentioned at all. At this time, gold is circulating in the Black Sea. These gold coins, called *chrysoi* and mentioned in other inscriptions,<sup>49</sup> were not local but were staters issued on the Attic weight standard by Philip, Alexander, or Lysimachos. Such gold staters have been found in several hoards. It is with these coins that the Olbiopolitans made their ‘gifts’ to the *skeptouchoi*, who were unlikely to have been satisfied by receiving bronze. However the abundant circulation of bronze is not synonymous with a monetary crisis, but rather a sign of the modernization of the system.<sup>50</sup> The most complex question to resolve concerning the local money is the meaning of the phrase *ek tetrakosiōn*, used in reference to the reimbursements made to Protogenes. According to the text the benefactor on two occasions (A 70–1; B 43–4): *δοὺς χρυσίον πᾶν χαλκὸν ἐκομίσατο ἐκ τετρακοσίων*. The figure of 400 *chrysoi* has been understood either as a recovery in bronze of the equivalent of 400 gold

<sup>48</sup> See most recently Stolba 2005.

<sup>49</sup> *IOSPE I*<sup>2</sup>, 25 + 31 (end of the fourth century BC?); *I.Olb* 28 (middle of the third century?) and 34 (*chrysoi* restored; end of the third/start of the second century BC?).

<sup>50</sup> On monetary crises and the circulation of bronze, see Grandjean 2007: 87–9.

staters (instead of a total recovery in gold), or as an indication of a rate, which would therefore have been 400 bronze coins for a stater of gold. The first solution can probably be ruled out, in so far as the expression is repeated on two occasions in the text, but both times for different sums. Therefore it is likely that the phrase refers to a rate, of a 'euergetic' kind that was advantageous for the city: why else would the decree specifically mention this if not to emphasize the advantage to the city of this ratio? We can therefore offer the following translation: 'though he had paid in gold, he recovered the total sum in bronze at the rate of 1:400'.<sup>51</sup> As L. Migeotte has emphasised, Protogenes could not do much (except locally) with the bronze coinage that had been given to him, but the objective was obviously not Protogenes' interest. A 'monetary crisis' is difficult to see here and rests on old and erroneous assumptions, such as the association between decline and the striking of bronze coinage or the interruption of minting from precious metals. It is clear that the city of Olbia did not need to strike its own coinage in gold, since it used a new international standard after the end of the striking of Cyzicene staters around 300 BC. Protogenes is the best witness of this: he spends *chrysoi* to help his fellow citizens. As for the local transactions, they were completed thanks to the coinage struck in bronze in the name of the city. The problem is therefore not a monetary but a financial, and maybe an economic one.

The first feature to assess as characteristic of Hellenistic economies is the greater complexity of financial techniques that were foreshadowed by those practices developed in Classical Athens.<sup>52</sup> Some Aegean cities developed rather elaborate systems that were at times very ingenious for promoting the circulation of liquidity. For example one thinks of the famous public subscription, known as the Law of Samos in about 260 BC.<sup>53</sup> This regulation created a public fund for the purchase of grain, and seems at first sight to have addressed a single issue, namely the feeding of the city. But its financial consequences are less obvious, subtler and a lot more important in quantitative terms. Thus, it had not escaped L. Migeotte<sup>54</sup> that the quantity of grain finally distributed to the citizens could correspond only to a small proportion of the real amounts needed to feed the community. Simple solutions could have been adopted, such as the use of a straightforward subscription or a euergetic gift that would allow the direct purchase of grain. Instead, the money from the subscription finances a foundation, a productive capital sum of which one spends only the interest.<sup>55</sup> This subscription (on Samos) produced about

<sup>51</sup> I therefore disagree with the translation at *Emprunt* 136 §§4 and 6 and 138 n. 424.

<sup>52</sup> Davies 2004; Chankowski 2007b: 105–6.

<sup>53</sup> *IG* XII 6, 172 (= *SIG*<sup>3</sup> 276); translated, Austin<sup>2</sup> no. 135.

<sup>54</sup> Migeotte 1990 and 1992: 190–1. The distribution would have been only 6 to 8 daily rations per year for a population of 5,000 to 7,000 citizens.

<sup>55</sup> On the development of this financial technique in the Hellenistic era, see Chankowski 2007b: 105–6.

50,000 drachmai, or just over 8 talents, based on a total of around 300 subscribers who came from about 250 families: this operation amounts to a 'levy' made upon the elite of the city. Money in a foundation of this nature is therefore employed to yield interest, without which it would not produce the amounts needed to buy grain. Through this process, the city makes an offer of credit to other more diversified elements of the population. On top of that, the grain is, at least in part, purchased (and not deducted for free) using the reserves of the goddess Hera, and so builds up a reserve of cash that can be used in case of public shortage of money.<sup>56</sup> In short, in this Samian document, grain may well hold the primary place in terms of the discourse, but the circulation of money is really the principal concern. But as soon as there is a shortage of money, the sophistication of these systems, dependent as they are on the supply of cash, makes the situation both visible and unbearable, as has been seen in the auction of the farming out of the *stolos* at Olbia.

The second crucial point is the global increase in expenditure, productive or otherwise. Expenses are clearly referred to in the Olbian decree and belong to well-known categories such as the purchase of grain, the payment of tribute or the construction of walls. But a typology is not sufficient, because it fails to detect any evolution from the Classical era and beyond. Among these expenses, two elements, at least in the case of Olbia, seem to be more specific to the Hellenistic era: tributary contributions and the steep escalation of price of grain. In contrast to its counterparts in Asia Minor, it is not certain that the city of Olbia had to pay tribute to any king before the second half of the third century BC. In other words, these payments, which were often quite demanding and difficult to anticipate (one did not know when the King was going to pass by and claim the 'gifts of his passage', τὰ δῶρα τῆς παρόδου, A 11), were a considerable form of expenditure and result in the transfer of huge sums of money when considered against the scale of the Greek *polis*.

Another element also affected dramatically global expenditure: the prices of grain. This commodity presents a problem, not because there can be shortages of it, but because of the considerable change in prices that could take place.<sup>57</sup> So during the first *sitodeia* under the priesthood of Herodoros (A 23–32), the price of grain stood at 0.2 gold staters for a medimnos, and the generosity of Protogenes consists at first in selling the commodity at half-price, namely 0.1 stater per medimnos. The second crisis (A 58–81) happened sometime after (but how soon is not known) the first and was a harsh one (*σιτοδείας γενομένης ἰσχυρᾶς*). The prices jump out of control: the medimnos is worth

<sup>56</sup> As Bresson (254–7) has shown.

<sup>57</sup> To borrow the very useful phrase of Descat (2004: 271) concerning Athens in the last third of the fourth century BC: 'le fait le plus caractéristique de cette période est moins la crise frumentaire en elle-même, qui n'est ni la première, ni la dernière, que le niveau des prix'.

0.6 staters, three times more than before, and within a short period of time increases further to the height of 1.66 staters, an additional increase of 166 per cent. Protogenes therefore gives 1,000 *chrysoi*, which allow the community to buy, if that current market price was in force, just over 600 medimnoi; but he also facilitates the sale of 2,500 medimnoi at a good price: the first 500 medimnoi at the price of 0.24 staters and the other 2,000 medimnoi at 0.387 staters per medimnos. If we were to translate these prices into silver drachmas at the expected rate of 20 drachmai for a gold stater, we can see that the initial price that was considered by the city to be high was 4 drachmai per medimnos. It is not straightforward to compare these prices with others, even if the normal price of a medimnos of grain in the retail market was often considered at around 5 drachmai per medimnos. This figure is certainly the one found in the 320s in Athens<sup>58</sup> or at Samos<sup>59</sup> in c.260 BC. It is clear, however, that the prices found on Aegean markets elsewhere were higher still. On Delos, in 282 BC, the price of grain was a little over 6 drachmai the medimnos, but around 10 drachmai in the first third of the second century BC.<sup>60</sup> The initial price of the medimnos at Olbia seems in fact rather low, a phenomenon explicable because this was also, under normal circumstances, the place of production. When importation was necessary, as Polybios shows when speaking about the economic situation at Byzantium in the same period,<sup>61</sup> prices rise, a consequence that is not particularly surprising. The fluctuation of price reflects above all the direction of commercial flow. In a general manner, if we wish to think of the problem of uncontrolled inflation, we can follow the suggestions made by R. Descat<sup>62</sup> on the 'grain crisis' that affected Athens in the 320s: the escalation of grain prices is in short the result of the presence of a real market for this commodity.

Finally a further point that really deserves a much more thorough study is the quantification of the expenditure of benefactors. Here we need to examine the relationship between the deficit of the city and the reserves of the benefactors: is there a relationship of cause and effect between the two? The greater complexity of financial systems and the possibility of borrowing money which we can see developing in the Hellenistic era precipitated the cities, Olbia included, into a debt spiral which of course they rarely acknowledge, but which one needs to keep in mind. One might look, for example, at Miletus

<sup>58</sup> Dem. 36 (*Against Phormion*) 39: the character named Chrysippos and his associate sell their grain at 5 drachmai even though the market price rose to 16 drachmai the medimnos. On the question of the price of grain, see the fundamental remarks made by Bresson 286.

<sup>59</sup> Once again in the 'Law' at Samos on grain (*IG XII 6*, 172) the price that had to be paid for the grain from the sacred land of Anaia was a minimum price fixed by the People, of 5 drachmai and 2 obols (lines 25–7).

<sup>60</sup> Reger 1994: 307.

<sup>61</sup> Polyb. 4.38.5.

<sup>62</sup> Descat 2004: 279.



in 211 BC<sup>63</sup> when the city invented a remarkable system, a parallel for which can be next seen only in the medieval period. This consisted of a loan made up by a subscription from the population, which replaced the classic system of interest-bearing capital with a lifetime rent that was especially dangerous for the public finances in the long term, even if there was not yet a crisis situation. All depended in this instance on the life expectancy of the contractors, who were perfectly aware of the advantages of this mechanism and subscribed to the operation using the name of their children. If we return now to Olbia, the loans there are not all *atokoi* (interest free) on the one hand, and are not always transformed into gifts on the other. There is no reason why such loans could not be operating simultaneously. Altogether, even if the situation of Hellenistic cities could vary a lot according to time and space, these were entities that were really or potentially deeply in debt, and were paying often high rates of interest to some individuals, not all of whom were outsiders (contrary to some widely held opinions).<sup>64</sup> And it is a well-known fact that loans are a way for wealthy people to get even richer, as they (normally) recover their capital with interest, at the expense of the whole population, which is a big difference from taxes. The development of loans structurally increases the wealth of the wealthiest. Hence, if Protogenes is rich, it is not only because he is capable of pursuing business abroad, but also because the whole city owes him money, both individuals and the state. The abolition of debts declared at the end of the decree can only have been preceded by long periods of collection of interest payments. Although the decree presents a series of selected successive events, it is clear that the crisis tends to persist and that indebtedness becomes a systemic problem, as the accumulation of debts over two generations of benefactors demonstrates. The pitiful state of the walls and the public ships confirms the idea that for a few years, if not longer, the city had had no means of investing in essential infrastructure.

To end this chapter that has focused on the financial aspects of the Olbian crisis, all that remains is to raise a more general question that cannot really be answered straight away. How is this crisis of liquidity linked with changes that were peculiar to the Hellenistic period and that concerned what one would call nowadays the 'real economy'? We have touched partially on the problem of changing grain prices and the integration in the sometimes complex mechanisms of the market. This remains without doubt an avenue which is worth pursuing in a more systematic way.

<sup>63</sup> *Emprunt* no. 97, with the adjustment to the date, as in Marcellesi 58, in the light of the new chronology of the stephanephoric magistrates.

<sup>64</sup> See e.g. Migeotte, *Emprunt* 371–2, who distinguishes between euergetic loans granted by the citizens to their own cities and business loans made by foreigners to the same cities.

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## Mobility, Society, and Economy in the Hellenistic Period

G.J. OLIVER

### INTRODUCTION

This chapter offers a fresh analysis of how mobility affected *poleis* and individuals in the Hellenistic period.<sup>1</sup> It draws on recent work on mobility, on network analysis, and on some of Douglass North's ideas (intentionality and not just transaction costs).<sup>2</sup> It addresses two main issues: the reasons why people moved (intentions) and the strategies employed by communities that affected mobility. This chapter-length study is necessarily selective: it considers especially the mobility of the elite and the interaction between their mobility and the communities. Archibald's contribution (this volume) deals with the mobility of artisans and mercenaries. The regional horizons embrace the eastern Mediterranean as far as Sicily in the west; Egypt and other areas deeper within the former Achaemenid Empire (the Levant, Mesopotamia, and beyond) have not been included.<sup>3</sup> The chronological or historicizing framework is never far away: do we see in the Hellenistic period intensification, or change, in the mobility of individuals or the strategies of communities who may or may not have received them?<sup>4</sup> After a brief introduction, two main sections address respectively the nature of movement, the problems of understanding the motivations for movement, and the social and geographic

<sup>1</sup> I would like to thank the Editors for their patience and their many and various comments; Vincent Gabrielsen for organizing and hosting the conference in Copenhagen; Claudia Moatti and Wolfgang Kaiser for their hospitality at the Mobility conference in Istanbul (2005). I have profited from suggestions made by the anonymous referees and discussions with and comments made by Christel Müller and Michael Sommer. I remain responsible for errors.

<sup>2</sup> For the latter, North 1981.

<sup>3</sup> These last regions, Van der Spek 2007 and Manning 2007.

<sup>4</sup> On questions such as 'intensity of change' see Horden and Purcell 2005: 352.

mobility of the elite, and then how communities rendered themselves more (or less) attractive to potential mobile peoples.

## 1. MOVEMENT: BEYOND *THE CORRUPTING SEA*

Horden and Purcell's *The Corrupting Sea* emphasized the mobility of people but left considerable scope for historical, social, and economic analysis that was not, and is not, on the authors' agenda. Their sequel, *Liquid Continents*, promises some ecological narration, but the authors believe that a political and economic narrative analysing the Mediterranean already exists.<sup>5</sup> The 'Liverpool School', the St Bertrand series of conferences, and their associated subsequent publications have addressed case studies and thematic approaches to Hellenistic economies, but mobility has not been significant in any of these and has played an understandably smaller role in the general surveys of the period.<sup>6</sup> However Claudia Moatti has developed a wide-ranging comparative project that explores the interaction of the dynamics of movement within institutions of the Mediterranean over the *longue durée*.<sup>7</sup> 'Dans l'espace méditerranéen et dans la très longue durée... la circulation des personnes constitue un fait structurel et structurant.'<sup>8</sup> Mobility can be individual, collective, pacific, violent, voluntary, controlled, negotiated, clandestine, permanent, and pendular.<sup>9</sup> Several contributions are relevant to aspects of mobility in the Hellenistic world, but while these are of enormous value, there is no systematic study of mobility for the period as a whole across the breadth of the region(s).<sup>10</sup> Such a study has yet to be written, and this chapter can only contribute to what otherwise requires more space, notwithstanding further methodological framing.<sup>11</sup> In addition to the

<sup>5</sup> Horden and Purcell 2005: 358 and 374 (the narrative is Abulafia 2003).

<sup>6</sup> *HellEc I*; *HellEc II*; *Approches*. Mobility in the Hellenistic period: Archibald 2005: 6–8. Surveys: Reger 2003, 2007; Davies 2006; see also Bresson 2007*b* and 2008 (but see pp. 62–70).

<sup>7</sup> Moatti 2004*a* (see Moatti 2004*b*: 1–24); Moatti and Kaiser 2007*a*; Moatti et al. 2009; see also Moatti 2006 (on Roman mobility).

<sup>8</sup> Moatti and Kaiser 2007*b*: 9.

<sup>9</sup> Moatti 2004*b*: 3. Some of the categories overlap: individual (peripatetic work; vagabond); collective mobility (nomadism); pacific mobility (associated with colonization [*sic*], festivals and pilgrimage), violent mobility (deportation or crusades), voluntary mobility (artists, students), or forced (expulsions or slavery), and clandestine (fugitives). Mackil (2004: 506) in a not dissimilar context uses the term 'pendular dynamic' of settlement and community to describe shifts in settlement patterns. For an illustration of the term 'pendular' in social geography, see McHugh and Mings' analysis (1996: 545 with fig. 3) of microcosmic migration and place attachment mapped for an individual over a lifetime. Cf. Brunet et al. 1993: 377 *s.v.* *pendulaire*.

<sup>10</sup> Bauzon 2007; Bertrand 2004, 2009; Bresson 2004, 2007*a*; Chaniotis 2004; Coudry 2004; Jockey 2009; Lefèvre 2004; Migeotte 2004; Moatti 2009; Müller 2009. Pébarthe 2009 is relevant, although on the fifth century BC.

<sup>11</sup> I will develop some ideas on theoretical approaches elsewhere.

social, economic, and institutional contexts, there is also a significant historical question that is appropriate in this book: the degree to which the Hellenistic period might have seen changes in mobility, particularly in the transitions which saw the creation of the Hellenistic kingdoms (fourth and third centuries; the 'royal transition') and the arrival of Rome (late third and second centuries; 'the Roman transition').<sup>12</sup>

Looking beyond Horden and Purcell we can therefore propose a deeper economic and social study of mobility within the Hellenistic period. To do so we might turn to social-science theory. While demography theory has been important,<sup>13</sup> the social-science theories of Douglass North (New Institutional Economics) and Mark Granovetter (networks analysis) have been more formative here.<sup>14</sup> North's recent work now emphasizes the central importance of intentions and plays down the self-conscious consideration of (the economics) of transaction costs.<sup>15</sup> Network analysis has potential for developing new approaches to economic history.<sup>16</sup> Of particular importance is Granovetter's work on weak and strong ties. He has demonstrated the important interaction between social structure, networks, and the economy: 'when economic and non-economic activity are intermixed, non-economic activity affects the costs and the available techniques for economic activity.'<sup>17</sup> Both North and Granovetter can illuminate the social and economic context of the mobility of people and its institutional context. For if we are to understand ways in which the economies of the Hellenistic world changed (or not), then we need to understand the movement of people and the degree to which individuals, either isolated as one person or collectively as groups, could wield economic power. For example, the question for polities in such a context was 'How did one attract potentially useful individuals and groups to one's community?' The

<sup>12</sup> The questions are effectively those asked by Giardina (2007: 743–4, 753–5) of late Antiquity: it is time that such questions are asked in a more pointed way of the 'Hellenistic period'.

<sup>13</sup> Scheidel 2007, an important starting point, seems pessimistic about some aspects such as integrating demographic and economic studies: 'Although there are no data from the Greco-Roman world that would allow us to trace the relationship between economic and demographic variation in the short term' (Scheidel 2007, 57). Demography of the Hellenistic period: Davies 1984; Alcock 1994.

<sup>14</sup> North has influenced the approach of *CEHGRW* (for this aspect, see Bang 2009); see also Bresson 2007b: 27; Manning *LP*: 10–11; Manning 2005, 2007, 2006: 257.

<sup>15</sup> North (2005: 78–9): 'Institutional change is the structural change humans impose on human interaction with the intention of producing certain outcomes. To the extent that institutional change alters outcomes as intended by the actors responsible, there is an identity between intentions and outcomes (although there is no implication that the intention of the players *improved overall economic performance*)' [my italics].

<sup>16</sup> See *Networks* 4–7. Only a small number of the contributions to *Networks* (Collar 2009; Doukellis 2009 (in a limited way); Rutherford 2009; Sommer 2009: esp. 95–6; Sandwell 2009: 132) actually engage with the ideas and vocabulary of network analysis. Müller 2010 (ch. 8) interprets long-distance commercial interactions in the Black Sea in light of Granovetter (1973, 1983) on weak and strong ties. On network analysis, see also Manning (this volume).

<sup>17</sup> Granovetter 2005 includes a useful resumé; quotation, 2005: 35.

corollary to this question might have been: 'How does one make sure that one does not lose (important) individuals from one's community?' How does a community encourage people to stay and not move? *Did* the community encourage people to stay (and not move)?<sup>18</sup> If communities did operate on the basis of self-interest, then some might have developed a desire to develop their economic well-being.<sup>19</sup> The analysis of mobility that this chapter introduces offers a basis for understanding the operation of some degree of (economic) self-interest among communities and how individuals and groups could serve such interests.<sup>20</sup> Equally, such an analysis also requires us to consider the reasons why individuals moved. The consideration of individuals and communities enables a more socialized approach to how self-interest was served: self-interest is contextualized within a social environment. This chapter suggests therefore a methodological framework and an economic context for two sets of questions concerning mobility:

1. If people move, what motivates their decision to move in a particular direction or to a particular destination? Why did someone move when he/she moved, and why there? One might ask what was the psychology behind an individual's movement, or better still ask what strategies did individuals operate (if any)?
2. Movement can also imply lack of movement, or end of movement (however temporally defined). If people of the Mediterranean had the capacity to move, why did people stop where they stopped? For some groups and individuals we might ask why people stayed where they were: so why did people *not* move?

With these two sets of question in mind, therefore, we finally turn to the two substantive sections on mobility in the Hellenistic world. Section 2 demonstrates the intentionality that characterized movement. It considers the mobility of the elite and how geographic movement might be associated with the existence or absence of social mobility within the community. Socio-economic considerations must therefore be seen as important factors that affected mobility in the Mediterranean. Conditions that determined the context for such factors were not necessarily the same over time. An economic-history analysis is important for an understanding of the dynamic of mobility. Section 3

<sup>18</sup> The types of movement that concern me here are those which lead to long-term or permanent absence from a community as opposed to the short-term/time-limited movements that might characterize *theoric* expeditions or embassies or even educational visits (although the latter could easily transform into long-term stays).

<sup>19</sup> Economic rationalism: Rathbone 1991, 2005; see also Chandezon (this volume); standards of living in the Greek world, Morris 2005; in the Roman, Scheidel and Friesen 2009.

<sup>20</sup> Mobility is one variable that permits exploration of micro- ('individual') and macro-linkage ('larger-scale aspects of social structure'), see Granovetter 1973: 1377–8.

looks at the communities and considers whether they made themselves more (or less) attractive to the social and geographic mobility of their own elite and, indeed to individuals in general. Although several studies of elites in antiquity exist, it is hoped that the theoretical framework offered here might allow a better understanding of one aspect of their mobility in the Hellenistic world.<sup>21</sup> For the self-conscious choices that communities made had an impact on the nature of the ties that communities enjoyed. Both strong and weak ties could serve communities equally well but the ease in creating or maintaining these ties could fluctuate over time.<sup>22</sup> At the heart of this chapter is therefore the underlying consideration of ‘adaptive efficiency’: could and did some communities change?<sup>23</sup> Or did institutions remain inflexible and therefore contribute to the decline of some *poleis*? These underlying historical questions are particularly important in the Hellenistic period.

## 2. UNDERSTANDING THE MOTIVATIONS FOR MOVEMENT

### Choices and movement

That individuals made self-conscious choices about their movements might need some exploration. An extract from an honorific decree of the early third century BC clearly illustrates the problems of identifying why individuals might move and which directions they might have chosen. The Athenians passed a decree in 283/2 that awarded the highest civic honours (the *megistai timai*) they could confer on one of their own citizens.<sup>24</sup> The recipient was the comic poet Philippides son of Philokles of the deme Kephale.<sup>25</sup> The awards given to the honorand included a gold crown and its declaration at the tragedy contest in the Great Dionysia, a bronze statue in the theatre, *sitēsis* (public dining rights) in the prytaneion, front seats at all public agonistic festivals, and the erection of the

<sup>21</sup> On elites: Gabrielsen and Gabrielsen 2001 are useful for Hellenistic Rhodes; Perrin-Saminadayar 2007 illuminates mid- to late-Hellenistic Athens; Oliver 2007a offers some insight in the Athenian elite of the late fourth and the third centuries. Otherwise, the most relevant works have come from a series of publications looking east from the Roman end of the Mediterranean (Cébaillac-Gervasoni 1983; Cébaillac-Gervasoni and Lamoine 2003; Cébaillac-Gervasoni, Lamoine, and Trément 2004).

<sup>22</sup> On the impact of the relative virtues of strong and weak ties on a macro-level, Granovetter 2005: 34–5.

<sup>23</sup> ‘Adaptive efficiency’ (North 2005: 169): ‘an ongoing condition in which the society continues to modify or create new institutions as problems evolve’.

<sup>24</sup> Gauthier 1985; Kralli 1999–2000; on what follows, see Oliver 2007a: 92–4.

<sup>25</sup> IG II<sup>2</sup> 657 + Add. p. 662 = Austin<sup>2</sup> no. 54 = Bielman no. 20 = Syll.<sup>3</sup> 374. The most recent synopsis is Paschidis 2008: 116–25 (see further below).



*stēlē* carrying the decree by the Temple of Dionysos (close to the theatre).<sup>26</sup> The awards recognized Philippides' lifetime contributions to Athens. In 301 at the battle of Ipsos, the combined forces of Lysimachos, Kassandros, and Seleukos defeated the royal partnership of Antigonos Monophthalmos ('the One-Eyed') and his son Demetrios Poliorketes ('the Besieger').<sup>27</sup> At the battle some Athenians who had been fighting on the losing side had died, others had been imprisoned. In addition, some Athenians seem to have been detained in Asia Minor, having been captured by Antigonos and Demetrios.<sup>28</sup> Philippides had been at this time operating in the 'court' of Lysimachos as one of the group of individuals that we refer to collectively now as *philoi* (friends):<sup>29</sup>

(16) And after Lysimachos the King had won the battle that took place at Ipsos against Antigonos and Demetrios, those men who were among the Athenian citizens to have died in that conflict he buried (20) at his own expense, but all those who became prisoners, he made representations for them to the King (i.e. Lysimachos) and secured release (*aphesis*) for them, while for those who wished to campaign as soldiers he made arrangements so that they would be assigned to regiments, but for those who preferred to go away he supplied them with clothes and gave them what they needed for travel from (25) his own resources and sent them away where each of them in fact wanted to go, there being more than 300 such men. He also asked, in addition, that those of the Athenians who had been captured in Asia and held by Demetrios and Antigonos, that these might be released.

We are concerned primarily with the soldiers captured here. A number of these were enlisted and allocated to the ranks within Lysimachos' army.<sup>30</sup> But a significant number were not willing to follow this path and wanted to leave. Philippides provided what these soldiers needed and they duly left to go where they wished to.

The passage is interesting for several reasons. First, it clearly identifies a large body of Athenian citizens who were no longer residing in Athens but serving amid the ranks of the Hellenistic Kings.<sup>31</sup> The numbers of Athenians who chose to switch allegiance to the victor is unclear.<sup>32</sup> The precise numbers

<sup>26</sup> IG II<sup>2</sup> 657 + Add. p. 662 ll. 60–70; for the theatral space as a location for civic honours, see Lambert 2008 (Lycurgan period) and Wilson 2009 (fifth century).

<sup>27</sup> Habicht 1997a: 80–1; Will<sup>2</sup> 79–83.

<sup>28</sup> See Paschidis (2008: 120–2; correct to dismiss Bielman 78–9).

<sup>29</sup> Herman 1980–1.

<sup>30</sup> Couvenhes (2004: 87–91) demonstrates that the institutions developed to handle and administer the employment of non-civic soldiers had perhaps become, if not more sophisticated, then more visible, echoing Launey's (1987 [1949–50]) claim that mercenary service with the Hellenistic kings was a complex organization.

<sup>31</sup> This is the first of two categories of Hellenistic mercenaries, those who served in the army of a Successor/Hellenistic King; the second being those mercenaries who served a city (Couvenhes 2004: 79 for this distinction).

<sup>32</sup> Couvenhes' (2004: 82–6, 107–9) text and translation (of Robert, *Collection Froehner* no. 52) discusses a more dramatic switch of paymasters at Theangela, where mercenaries hired by the

for those who, on the other hand, decided to leave and decline the opportunity to continue service for Lysimachos was over 300. In four lines of text there is considerable emphasis on fulfilling the wishes of the Athenian soldiers.<sup>33</sup> Moreover the text of the decree indicates that Philippides gave resources to the soldiers to go where they wanted, for the verb is in the (imperfect) indicative (as opposed to a different mood): subtly, perhaps, the sense is that the Athenian mercenaries who had recently been on the losing side at Ipsos were to go precisely where (as opposed to wheresoever) they wanted.<sup>34</sup> The movement that Philippides facilitates is a specific one for those whom he aided: it was not aimless.

### **Movement as disruption: mobility and ‘wandering’**

Movement, as Horden and Purcell and others have shown, is a feature of the Mediterranean. The Greeks were not without some prejudice in their appreciation of different forms of movement. This may be sensed behind Philippides’ intervention at Ipsos: the Athenian mercenaries do not simply wander off. Wandering was something that was undesirable: movement should be of the right kind. Movement (such as wandering) could fall outside the norms of behaviour and be regarded in a negative way: many kinds of purposeful movements (piracy or brigandage) could be equally as disruptive as wandering.<sup>35</sup> Those who wandered in the Mediterranean world were not always highly regarded in Greek eyes: ‘Since Homer, calling someone a wanderer was tantamount to insulting that person.’<sup>36</sup> It was not until the special case of Diogenes the Cynic, an ‘outcast wanderer’, that we see a distortion of the negative image of the wanderer.<sup>37</sup> Diogenes styles himself ‘cityless, homeless, deprived of fatherland, beggar, wanderer, living from one day to the next’.<sup>38</sup> Among the emotive words here is ‘wanderer’: for to wander was to disrupt, unsettle, to threaten accepted behaviour.<sup>39</sup> Diogenes, the cosmopolitan, self-consciously reversed the negative associations of a wanderer.

city leave (because of shortfalls of payment) to join the enemy (Eupolemos) who was currently besieging the city in 315–313 BC.

<sup>33</sup> IG II<sup>2</sup> 657 + Add. p. 662 lines 22, 23–4, 25.

<sup>34</sup> IG II<sup>2</sup> 657 line 25: οὐδ’ ἐκαστοι ἡβ[ο]ύλοντο (as opposed to οὐδ’ ἅν κτλ).

<sup>35</sup> For these categories: Horden and Purcell: 618.

<sup>36</sup> Montiglio 2000: 92. Exceptions include e.g. Solon, who is received warmly by Kroisos the King of Lydia (Montiglio 2000: 88 on Hdt.1. 30).

<sup>37</sup> For the term and application to Diogenes, Montiglio 2000: 99; on the Cynics’ (positive) interpretation of the term, *ibid.* 102–3.

<sup>38</sup> See Montiglio’s discussion (2000: 99 with n. 73) of Diog. Laert. 6.38.

<sup>39</sup> Wandering is acceptable, even tragic, in Odysseus’ case (Montiglio 2000: 89: ‘Odysseus unwillingly wanders away from his homebound journey’).

Other forms of discourse in the fourth century BC, apart from Plato's barbed comments about wandering sophists, expressed equally strong feelings against wandering people.<sup>40</sup> Isokrates, for instance, speaks frequently in several speeches from c.380 to the 350s or 340s of the phenomenon that he perceives as a particular menace: 'those who, now wandering through the lack of their daily needs, also inflict troubles on whomsoever they meet.'<sup>41</sup> Isokrates considers this 'roving population' (the term used by Fuks) as synonymous with the worst problems of this region.<sup>42</sup> The solution he desires is to give these people a destination, a home, a colony (preferably in Asia Minor, which he thinks the united Greek forces should conquer), for currently they move because of their lack of resources (their poverty).<sup>43</sup> Wandering therefore was not desirable: this concept was widely understood in the Greek world, by Greeks, and by those who engaged with Greeks.

The discourse, in Greek, that the Elymian people of Entella recorded in bronze during the early Hellenistic period demonstrates this point.<sup>44</sup> Their wandering was a desperate measure and clearly undesirable: the people of Entella were forced to leave their city and later resettle (*synoikismos*). Neighbouring communities assisted the Entellans in various ways during this process. On re-establishing their community, the Entellans passed several decrees of thanks and set them up in bronze. In one, the people of Entella praised the people of Henna for their good will:<sup>45</sup> 'we (people of Entella) were in flight and we were wandering.'<sup>46</sup> The people of Henna invited them in and welcomed the '*ville errante*'. It is no coincidence that the verb used for wandering is the same as that used by Plato to denigrate the sophists and by Isokrates to describe the disruptive elements in fourth-century Greece.<sup>47</sup> To describe a city as wandering, therefore, was in no sense to convey a positive image: this was a desperate situation to be in.<sup>48</sup>

<sup>40</sup> Plato on wandering sophists: Montiglio 2000: 92–3.

<sup>41</sup> Isoc. *Philippus* 120, in Fuks 1972: 28 = Fuks 1984: 62.

<sup>42</sup> Fuks 1972: 29 = Fuks 1984: 64.

<sup>43</sup> Fuks 1972 = 1984. For a more extensive discussion of the historical context of this phenomenon and a consideration of possible archaeological evidence in the fourth century, see Mackil 2004 (ref. to Isokrates at p. 507 with n. 85). On Hellenistic settlements, see Cohen 1995 and 2006.

<sup>44</sup> Elymians are the people of north-west Sicily. The Entella bronze inscriptions came into the academic realm in the 1980s, *SEG* XXX 1117–23 (*SEG* XXX 1121 = Austin<sup>2</sup> no. 131). For a convenient review of the tablets, see Loomis 1994: 127–31, who also shows that Entella Tablet VII is a forgery (accepted, e.g. by De Angelis in *AR* 47 (2000–1): 191).

<sup>45</sup> Henna qualified as a Greek city (*Inventory* no. 19). But Entella is omitted from the *Inventory* 1290–7, presumably because it is considered as a non-Greek community, and one whose status as a *polis* does not even qualify it as a (Greek) non-*polis* settlement.

<sup>46</sup> *SEG* XXX 1123 lines 9–10 (quotation), lines 8–13.

<sup>47</sup> Montiglio 2000 makes no association between the negative aspects of wandering and the discourse in Isokrates, as discussed by Fuks 1972.

<sup>48</sup> In an otherwise very important study, Mackil (2004) overlooks these important lexical attributes of 'wandering'. Leaving the city may have been a response to problems, but 'wandering'

The discussion of 'wandering' is critical for our appreciation of the intentions behind mobility in the Mediterranean. Movement was not usually random, it was thought out. But movement could disrupt. When Philippides gave assistance to those Athenian soldiers after Ipsos, they had made decisions, they made choices about their movement. This is what Philippides' decree conveys: movement was not to *wheresoever* the Athenian soldiers wished, it was to a destination they had chosen. What motivated the choices of the individuals undertaking Philippides' aid is of course difficult, if not impossible, to determine. But we can certainly speak of choices being made: in this instance, two options were open, to stay and fight (and be paid) in Lysimachos' army, or to leave for another paymaster or another purpose. For those who chose to leave, there was a subsequent decision about where to go. There is no indication here that any of the 300 or more returned to Athens, their home city, but that cannot be ruled out. We might perhaps assume that these Athenians had been fighting on a voluntary basis, but we cannot be sure.<sup>49</sup>

The Athenian survivors of Ipsos demonstrate how complex decision-making processes were part and parcel of movement in Mediterranean life. Different strategies were followed. But the extended discussion of the nature of movement (as opposed to, for example, wandering) has allowed us to consider that movement was undertaken within wider parameters. Movement can be a sign of economic difficulty in the community of origin. The *polis* was clearly vulnerable to the loss of its own members. Different factors certainly stimulated movement and one such factor that may have been shared by those who chose to move was likely to have been the wish to seek better opportunities elsewhere.

### Reasons for moving: the socio-economic elite

If we therefore consider why individuals moved from a city, we need to think not only about the nature of the movement (short-term absence, long-term/permanent absence) but also the reasons why people moved *or* stayed. In the Mediterranean mobility was important, but not everyone was on the move: we should also be concerned about those who chose not to move.

Socio-economic mobility, a movement of a different kind, within the community might have encouraged some people to stay. Our first example

was certainly not a solution. The dislocation produced by wandering in Greek *mentalités* is underplayed by Mackil.

<sup>49</sup> For Athenian *epilektoi* serving with Demetrios at the end of the fourth century, or possibly in the 290s, see *ISE* I no. 7 = EM 12749 with Oliver 2007a: 180 (opting for the earlier date); on the statue for Demetrios, see Oliver 2007b: 192 and 197.

**Table 16.1** Proportion of families who provide Ephebes serving in the later Hellenistic period (167–88 BC) and whose activity can be traced to other periods of Athenian history

The centuries in which families with ephebes serving in 167–88 BC can be found to have been active	Percentage (approx.) of all families with ephebes serving at some point 167–88 BC for whom activity can be found in other periods
5th century	3%
4th century	19% (128/691 families)
3rd century	18% (123/691 families)
2nd century	69% (623/691 families)
1st century	37% (258/691 families)
Imperial period	23% (158/691 families)

is Athens, a city that may not have been typical in terms of size and population (large on both counts) but nevertheless confronted the same potential losses of people through movement (or emigration) as other communities. In Athens the elite (or *notables*) demonstrates some stability in the Hellenistic period: Perrin-Saminadayar has shown that among the families providing ephebes in the late third to early first century BC, over half are known to have been active in Athens and Attica for several centuries (see Table 16.1).<sup>50</sup> Broadly speaking one in five Athenian families who provided an ephebe in the later Hellenistic period can be seen to be flourishing three to four generations before or later. Perrin-Saminadayar demonstrates real social stability for a significant proportion of Athenian families in the Hellenistic period.

To determine the wealth-level of families in the Hellenistic period is more difficult. Membership of the ultra-elite *Athenian Propertied Families* (*APF*) studied by Davies (1971) was based on the payment of liturgies, but many of these obligations had largely disappeared by the end of the fourth century.<sup>51</sup> A revised (second) edition of *APF* will include cavalry service as a criterion for inclusion in this group and so expands both the numbers of families who provided sons for equestrian service and will increase the numbers of qualifying *APF* families.<sup>52</sup> Until Davies's new edition appears, Bugh's conclusions must suffice: there was not only social stability among serving equestrian families but also 'new' wealthy families were well represented among cavalrymen. Of the cavalry officers' names from the first half of the third century, half of the preserved names belong to families whose wealth is not in evidence before the

<sup>50</sup> Perrin-Saminadayar 2007: 397 (393 out of 691).

<sup>51</sup> Davies 1971: xxv. Trierarchic performance does not completely disappear, although its form in the late third century is unclear, see Petrakos, *Δήμος τοῦ Παμνοῦντος* II 31 (= *ISE* I no. 29 = EM 13099). Eisphora payments may have been phased out by the end of the third century, Oliver 2006.

<sup>52</sup> Bugh 1988: 225–62 for a catalogue of such men; Oliver and Davies 1996 on the inclusion of cavalrymen in the new edition of *APF*.

third century;<sup>53</sup> some families providing cavalrymen in the third century had been wealthy in the previous century;<sup>54</sup> many families of third-century cavalrymen continue to enjoy prosperity in the second, and in some cases in the first century BC.<sup>55</sup> The proportion of cavalry officers in the second century that belong to families with little or no background from the earlier periods is small, but nevertheless demonstrates clearly that new families with recent wealth penetrated the elite institutions of the Athenian *polis*.

The religious festival of the Pythais offers a similar story: families whose wealth can be traced back to the third century and, in several instances, earlier still continue to be prominent among those who figure in the revived Atheno-Delphic celebration. The Pythais, a festival that involved a procession to Delphi and celebrations for Apollo that involved many kinds of performers, was resumed in the second century.<sup>56</sup> The evidence for those Athenians involved in the festival, the Pythaistai, demonstrates that the most powerful families are very well represented:<sup>57</sup> well over 40 per cent of those who participated in the Pythais belong to families visible in evidence of one kind or other.<sup>58</sup> But upwardly mobile families broke into Athenian elite culture, as their participation in the Pythais suggests. Although Karila-Cohen's study has not yet been published fully, the initial conclusion is that for the less rich, participation in the Pythais was a direct way of developing one's network with the most powerful families of the city: participation in the Pythais was not closed only to those families who were established.<sup>59</sup>

Perrin-Saminadayar's extensive prosopographical study of Athenian ephebes from the late third to first centuries BC reinforces all these observations.<sup>60</sup> In a sequence of assessments of the Athenian *ephēbeia*, he shows that a very distinctive Athenian elite dominates this institution, but also that new families provide sons and can break into the high society in the *polis* (229–168 BC).<sup>61</sup> In the second phase (167–88 BC), the institution's success is due directly to the increasing number of Athenians who participate *and* its opening up to foreigners.<sup>62</sup> It is the very permeability of the *ephēbeia* that reflects its success. The ability of the *polis* to facilitate upward mobility reflects the

<sup>53</sup> Bugh 1988: 202.

<sup>54</sup> Ibid. 202–3.

<sup>55</sup> Ibid. 203–4.

<sup>56</sup> Habicht 1997a: 275–6. The Pythais was last performed in the fourth century and revived in 138/7 BC. The performers figure from the celebration of 128 onwards.

<sup>57</sup> Karila-Cohen 2007 on some preliminary findings of her socio-economic study of the Pythaistai who are listed in inscribed records for the Pythais for 138/7, 128/7, 106/5, and 98/7 BC.

<sup>58</sup> Karila-Cohen 2007: 367 n. 2: good prosopographical records can be compiled for 417 out of the 1024 named individuals involved in the four celebrations of the Pythais.

<sup>59</sup> Karila-Cohen 2007: 371.

<sup>60</sup> Perrin-Saminadayar 2007 presents a thorough assessment of Athenian cultural life in this period.

<sup>61</sup> Ibid. 31–101 at 81–5.

<sup>62</sup> Ibid. 199–478; foreigners 449–78.

community's capacity to adapt its institutions to its own advantage on an international level.<sup>63</sup> The institutions of the city allowed Athens to grow after the mid-third century nadir.

Individuals are likely to have chosen to stay, therefore, if opportunities for social (upward) mobility existed. Wealth and wealth creation were almost certainly necessary to sustain such social mobility: Athenians enjoyed new opportunities for such advancement when Delos was made an Athenian possession in the second century BC.<sup>64</sup> Delos was the source of wealth for a good number of successful Athenian families in the second half of the second century and the early decades of the first.<sup>65</sup> But there were differences between the institutions that Athens established on Delos and those that existed on the mainland: those at Athens were more prestigious for the Athenian elite than those on Delos. But this did not deter many Athenians from investing time in the island *ephêbeia*, for example. Athenians serving as ephebes on Delos feature prominently in island life.<sup>66</sup> It was possible to become successful and move from Delos to Athens, but some chose not to pursue that route and stayed on the island.

What does this evidence from Athens for social mobility in the Hellenistic *polis* tell us about the incentives for individual movement? Civic life was rich with opportunities, with attractive institutions that allowed new families to participate alongside the well-established traditionally prominent Athenian families. Athens was a community in which individuals may well have preferred to stay. But the addition of Delos certainly encouraged movement, although only in a limited way that saw some pendularity between the mainland and the new Athenian colony. The Athenian occupation of Delos is a good example of the interaction of social- and geographical mobility.

But individuals did not always wish to stay in Athens, and despite the success of the *polis* in the second century, there were particular times of considerable difficulty. The political changes of the late fourth and third centuries probably gave some Athenians cause to leave. The arrival of new Hellenistic powers in the eastern Mediterranean clearly provided different opportunities for those willing to move. In some cases changing circumstances associated with

<sup>63</sup> Ibid. 31 n. 1: the *ephêbeia* was 'une institution en constante evolution'.

<sup>64</sup> Although a 'free port', it is clear the Athenians prospered from their supervision of the island.

<sup>65</sup> Tracy 1982: 167; Roussel 1987 is still fundamental; Tracy (1982: 159–82) offers a more up-to-date insight; Habicht (1997a: 246–63) summarizes much of his work published elsewhere; Perrin-Saminadayar 2007: 479–521 on the *ephêbeia* at Delos.

<sup>66</sup> Perrin-Saminadayar (2007: 488) shows that the *ephêbeia* on Delos was less prestigious and therefore attracted fewer Athenians than its counterpart on the mainland. It looks as if those Athenians who invested most in Delian institutions tended to stay on Delos and not participate in Athens-based institutions (ibid. 507–8).

these new powers forced some, and provided an opportunity for others, to move from their home cities.

The Athenian defeat in the Lamian war produced a significant shift in the short-term composition of the elite: the movement and subsequent deaths of Athenian leaders such as Hypereides and Demosthenes were consequences of the defeat.<sup>67</sup> The end of the fourth century saw more change. Stratokles' opposition to local politicians such as Demochares provides the background for several major Athenians leaving the city, including Demochares, Philippides, and Kallias of Sphettos.<sup>68</sup> The *polis* at the time of Kallias' departure was described later as being a period when the democracy (*dēmos*) was dissolved.<sup>69</sup> Kallias lost property in the process of his disappearance from the city as the decree of 270/69 says: 'but, rather, his own property he allowed to be confiscated in the oligarchy so as to act in no way in opposition either to the laws or to the democracy of all Athenians'.<sup>70</sup>

Demochares returned to Athens; Kallias did so briefly (serving Ptolemy II); and Philippides *probably* remained in Lysimachos' court.<sup>71</sup> But all three had left Athens, and two (Kallias and Philippides) certainly served in the circle of one of the new Hellenistic kings. These examples illustrate well the nature of the real change not only in the composition of the elite but their movement. Those who left Athens lost on the local level, temporarily perhaps, but were able to benefit from opportunities that the Successors presented. It is likely that what attracted Kallias and Philippides to their new destinations was not dissimilar to what drew Athenians to serve in the armies of the Successors. But movement did not always see such migrants returning home. When migrants did return, they might have come back because their city of origin had become attractive again (regime change) or their current destination may have become difficult. Kallias however preferred to pursue the opportunities that serving Ptolemy II and later III offered: he ended up in Halikarnassos. Demochares returned to Athens once King Demetrios Poliorketes was no longer dominant and the pro-Macedonian stance of the city had dissolved. Philippides may not have returned to Athens, and his service as *agonothētēs* may even have been undertaken *in absentia*, although this may seem *prima facie* unlikely.<sup>72</sup>

The example of the Athenian elite in the late fourth and early third century is typical of the Hellenistic age. The rapidly changing circumstances saw what now looks like an ebb and flow of mobile individuals, as political and

<sup>67</sup> Habicht 1997a: 40–2.

<sup>68</sup> Ibid. 77–80.

<sup>69</sup> Shear 1978: 6, Ag. I 7295 lines 78–83.

<sup>70</sup> Ibid. lines 80–3.

<sup>71</sup> On the basis of IG II<sup>2</sup> 657 lines 29–31, Paschidis (2008: 117–18; following Bielman 78–9) makes the case that Philippides *remained* in Lysimachos' court at the time of passing of the honorific decree in 283/2.

<sup>72</sup> IG II<sup>2</sup> 657 lines 29–31. The critical phrase at lines 29–30 (καὶ τοῖς ἀεὶ περιτυγχάνουσιν Ἀθηναίων χρήσιμ|ος ὦν διατελεῖ κτλ.) contains the verb (περιτυγχάνω) that normally suggests that the honorand is indeed abroad (cf. IG II<sup>2</sup> 492 line 16).



economic circumstances in their home cities or new destinations fluctuated. The widely changing circumstances of Hellenistic polities whose fortunes fluctuated at different times produced at the micro-level cogent reasons for individuals to move (or stay). What is distinctive about the Hellenistic period is that the discourse of the communities who sought to attract the mobile people of the age is heard more widely throughout the eastern Mediterranean and that the language of this discourse is broadly homogeneous.

### 3. COMMUNITIES AND THE ATTRACTIONS OF MOVEMENT

So far we have considered the movements undertaken by civic elites. Now we move from individuals to institutions and look at how polities might have influenced movements of people. The emphasis here is less on the (negative) effect of removing individuals but rather on the more (re)generative processes that made a community more attractive to outsiders and sustained the community as an attractive place for its population. Here the intellectual framework, building on the idea that movement was often intentional and rational, operates with a network analysis approach. If movement was intentional in some way, then communities could render themselves more attractive not only to their members (reinforcing strong ties) but at times to others (developing weak ties). To attract individuals into the network of ties that a community enjoyed was likely to strengthen a community: both strong and weak ties could be developed.

To develop a more institutional approach to movement shifts the focus of agency from individuals moving to how communities (or nodes) might have attracted or deflected movement. Both perspectives need of course to be considered. The model of movement in the Mediterranean developed by Horden and Purcell looks for the people. But because movement was directed usually towards a destination, the relative attractions of a node (whether indeed that was one royal court or another, or one polity or another) could hold differing levels of attraction *qua* node. The choices that mobile individuals made therefore need to be contextualized in terms of the relative attraction of nodes, such as polities or Hellenistic powers. And similarly, one might express the links that such nodes developed in terms of weak and strong ties.

Polities in the Mediterranean can be seen as entities that could render themselves more or less attractive to movements of individuals; they were in effect in competition.<sup>73</sup> *Polis*-behaviour was demonstrative: outward

<sup>73</sup> Ma 2003.

displays of powers of attraction were generated by a *polis*. The community's attractiveness to outsiders could be expressed as a virtue<sup>74</sup> or seen as an element that needed emphasis or enhancement.<sup>75</sup> The publication of inscribed honours is an obvious example of a polity's desire to display the community's wish to make itself attractive to outsiders: hortatory clauses displayed the discourse that the community wished to convey to other potential benefactors/honorands.<sup>76</sup>

At one extreme, a community might integrate new members to the community by opening up citizenship to those outside the *politeia* and so develop strong ties. At the other extreme, the weak ties that *poleis* exercised might include relationships characterised by *proxenia*, *ateleia*, theoric connections, even citizenship, or perhaps also some aspects of *philia* that Hellenistic Kings established with their agents.<sup>77</sup> The change in the ways in which such ties were pronounced may reflect the degree to which the impact of such pronouncements fluctuated (as opposed to the importance of the institution itself).

*Poleis* may therefore have chosen to make themselves attractive to both mobile and potentially mobile individuals. We are told that at Tanagra in the late third century BC inhabitants were wealthy and 'to their needy citizens and to wandering strangers they give from what they have and allow them to take freely'. The city may have provided for the less well-off citizens, but in the context of mobility and rendering the community attractive to foreigners, Tanagra has specific qualities: 'it is the safest place in Boeotia for foreigners to stay in.'<sup>78</sup> Perhaps it is this kind of assessment that suggests the community was intentionally making itself attractive to mobile individuals.

Communities needed to attract people, but not just those who were actually on the move, for local populations could equally move away. There are a few examples of polities that opened up citizenship, and it is tempting to see that in many cases such operations were designed clearly to retain populations by enhancing the status of local non-citizens. Of the seven known cases where citizenship was sold, pressure to raise revenue seems to have been the main driver only in some instances.<sup>79</sup> In other cases, concerns for manpower may also explain such changes.<sup>80</sup> While actual population loss may have been a major concern, *potential* population loss may also have been a pressing

<sup>74</sup> *Locus classicus*: Thuc. 2.39.

<sup>75</sup> Xenophon, *Poroi* 2–3.

<sup>76</sup> Hortatory clauses: Henry 1996 offers a technical analysis of Athenian formulae; Ma (2003: 18) on 'the shared language of honours'.

<sup>77</sup> The *philoi*: the 'human hinges of Hellenism' (Davies 2002: 11).

<sup>78</sup> Herakleides Kretikos 1.8–9.

<sup>79</sup> On the seven examples (Byzantium, Dyme, Tritaia, Ephesos, Aspendos, Thasos, Phaselis), see Robert, *Hellenica I*, Paris, 1940: 37–41; fiscal pressure (following Robert): Gauthier 1985: 201.

<sup>80</sup> Ogden 1996: 296–9 (manpower, as well as raising revenue).

reason, given that the local non-citizens who were targeted were precisely the people who might have left to go elsewhere. The sale of citizenship may therefore have persuaded non-citizens already present to stay in the *polis* as citizens.<sup>81</sup> In such cases the ties that a community has with its non-citizen population are strengthened.

Preventing movement away from one's community was likely to have been a major threat to a community. Social cohesion and the prevention of migration was therefore likely to be important to the economies of the *polis*. Strabo emphasizes Rhodes's social stability, for it 'is also remarkable for its good order (*eunomia*) and for the care it devotes to the rest of its administration and especially to naval matters'.<sup>82</sup> Gabrielsen reinforces Strabo's description of the socio-economic activity of the elite who helped to preserve the status quo on Rhodes and prevented social unrest.<sup>83</sup> For the wealthy families on Rhodes used membership of associations to control the principal economic factor on the island, manpower.<sup>84</sup> The associations satisfied individuals' desire of honour (*philotimia*): some individuals could refer to the honours they had received from many different associations, but few could compete with Hegtor who had been praised by twenty-seven associations.<sup>85</sup>

Gabrielsen's interpretation of the Rhodian associations intentionally echoes Strabo's view of island life:

the Rhodians care for the common people (*dēmos*) although they do not live under a democracy: they wish nonetheless to maintain the goodwill of the mass of the poor. And so the common people are provided with food and the wealthy support those in need according to an old tradition; they have liturgies through which the poor are provided with food, with the result that the poor receive sustenance and the city has no lack of available manpower, particularly as regards the fleet.<sup>86</sup>

Rhodes was not only a major commercial centre but a significant producer of commodities that could be sold abroad. The vineyards on Rhodes depended on manpower, and such commercial operations were vulnerable if social unrest (and emigration) reduced production.<sup>87</sup> Rhodian associations could be composed of the real elite and/or lower social groups.<sup>88</sup> The associations allowed individuals to operate as communities that could offer members security (e.g. maintained burial areas) that might not have otherwise been

<sup>81</sup> Compare the grant of improved status (and in some cases citizenship) by Ephesos during the Mithradatic War (*Syll.*<sup>3</sup> 742).

<sup>82</sup> Austin<sup>2</sup> no. 110 = Strabo 14. 2. 5 (652–3C).

<sup>83</sup> Gabrielsen 36; in general, see Gabrielsen 2009.

<sup>84</sup> Gabrielsen 2001: 237; also 225.

<sup>85</sup> *Ibid.* 227.

<sup>86</sup> Austin<sup>2</sup> no. 110.

<sup>87</sup> For example, in the year of revolution on Chios (412 BC), the production of wine (and wealth) was affected by the rebellion of slaves (Thuc. 8.40).

<sup>88</sup> Gabrielsen 2001: 233–4.

possible.<sup>89</sup> Associations therefore offered communities channels that enhanced the strong ties of different social groups within the *polis* and ultimately with the *polis*.

The services that the rich provided for the city, benefactions and liturgies, have been studied extensively.<sup>90</sup> But demonstrations of how benefaction was a self-serving operation that served both benefactor and the community are less widespread.<sup>91</sup> The promotion of social cohesion and stability in the population of the community was desirable. Loss of manpower was perceived in the Greek world as a sign of weakness.<sup>92</sup> In the Hellenistic world the institutions that facilitated the provision of services and other forms of (re)distribution of wealth become a familiar feature of the *polis*. Fröhlich's study of honorific decrees rewarding gymnasiarchs in the Hellenistic *polis* highlights the fact that the provision of oil was among the prominent services of honorands from the middle of the second century BC.<sup>93</sup> But the beneficiaries of these services included individuals who would not necessarily have used the facilities of the gymnasium on a regular basis. The outstanding example of such benefaction is Zosimos of Priene, whose actions in the first century BC permit at festivals 'all the citizens, the *paroikoi*, the *katoikoi*, the foreigners and the Romans' (*I.Priene* 112, lines 77–80) to be able to bathe without payment.<sup>94</sup> The opening up of individuals' benefactions or services within the *polis* to men, women, and children beyond the adult male citizen population becomes particularly prominent in the later Hellenistic period: public banquets, membership of the *ephēbeia*, the distribution of oil, and *collations* are no longer the preserve only of citizens in many *poleis*.<sup>95</sup> One might be able to demonstrate that benefactors perform services outside of the tenure of specific civic office.<sup>96</sup> But the real interest here is that the beneficiaries of such actions in the later Hellenistic period are increasingly the population as a whole as opposed to the (male) citizen body.<sup>97</sup>

<sup>89</sup> Ibid. 235.

<sup>90</sup> Veyne 1976; Gauthier 1985. Civic benefactors: Migeotte 1997; royal benefactors: Habicht 1997b, Bringmann 1997 (with Bringmann 2001; Bringmann and von Steuben 1995); Hellenistic/Roman era: Ferrary 1997.

<sup>91</sup> See Müller (this volume). For some initial remarks on the economies of benefaction Migeotte 1997: 191–6; for early Hellenistic Athens, Oliver 2007a: esp. 193–259. Rosivach 1991: esp. 194 (on fourth-century Athens) is important.

<sup>92</sup> Polyb. 36. 17. 5–10 = Austin<sup>2</sup> 99, with the remarks of Davies 1984: 267–9.

<sup>93</sup> Fröhlich 2009: 60.

<sup>94</sup> Ibid. 68; 85–91 for a text and translation of *I.Priene* 112.

<sup>95</sup> Gauthier 1985: 72–4; Fröhlich 2005: 245; 2009, 69 (e.g. Eretria, Pergamum, Sestos but not Mylasa).

<sup>96</sup> So Gauthier 1985: 74. See e.g. Archippe, *SEG* XXXIII 1035–41; cf. Bielman 2002 no. 32; Picard 2006 for recent translations, discussion, and bibliography.

<sup>97</sup> The relationship between this kind of operation and the nature of local citizenship in the late Hellenistic and early Roman period needs further explanation (see Fröhlich and Müller

The opening up of the institutions of the *polis* beyond the citizen population made the community attractive to a mobile population who might (or might not) choose to visit/come to one's city. Greater social inclusivity of the institutions of the *polis* distributed benefits to other members of the population. The *katoikoi*, *paroikoi*, other social groups, foreigners, and Romans in particular, might not ordinarily have enjoyed privileges in the Greek *polis*, but in the later Hellenistic era they were more likely to have been able to participate in and benefit from many of the institutions that might typically have been reserved for citizens in the Classical period. Patterns such as these are likely to have been developments that were required to assure the sustainability of the *polis*. Benefactions and liturgical services may not have been sufficient conditions to promote *polis* economies, but they certainly facilitated social cohesion and made the *polis* attractive to the mobile individuals of the Hellenistic age. Actions by the elite on behalf of the *polis* allowed the city to develop, and were likely to have been a necessary condition of economic growth.<sup>98</sup> The benefits of benefaction and, indeed liturgical services are manifold, for the benefactor's actions help to promote the *polis* and render it more attractive for the existing population *and* for visitors. Invariably members of the civic elite and the *polis* as a whole are both likely to prosper if the community is convinced that residence remains attractive on the one hand for the existing population, and that the community is one which is welcoming to outsiders on the other.

## CONCLUSION

Ultimately the *polis* needs to protect itself from movements of people away from the city. But it can also enhance the community by encouraging movement to the city. In the Hellenistic period *poleis* were often affected if people moved from the city and foreigners chose not to visit or stay in one's *polis*. For the economies of the Hellenistic world, therefore, mobility was a major civic concern. The threat to the *polis* was very real. The power of Hellenistic kings and the competition that polities offered in this period made it necessary for the *polis* to demonstrate and advertise their qualities. The epigraphical evidence of honorific decrees and the services of benefactors and the development of institutions within the *polis* are symptoms of such concerns. Several civic institutions allowed strong and/or weak ties to be developed. Such ties or

2005; on Athenian citizenship in the late Hellenistic period, Oliver 2007c; Perrin-Saminadayar 2005).

<sup>98</sup> Cf. Zuiderhoek 2005: 178; for his important and broader study of benefaction in Roman Asia Minor and its importance for social integration, see Zuiderhoek 2009.

networks made communities attractive and sustainable. In some cases they might have promoted economic growth. Developments in some *poleis* certainly demonstrate signs of 'adaptive efficiency'. Decisions about mobility made by both individuals and communities had important economic (and social) consequences. The intentions behind individual choices about mobility and the strategies that communities presented demonstrate the ways in which (potential) mobility worked as a socio-economic driver. The economic history of the Hellenistic period too can be illuminated by the study of mobility. Changes in the *polis* suggest that institutions adapted and simultaneously influenced behaviour. The wider context in which people made choices about movement cannot easily be separated from their social environment.

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## Inter-Regional Economies in the Aegean Basin

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It is now a widely held view that most economic activity in the Hellenistic world—indeed, in Antiquity generally, if not in the pre-modern world—occurred in a local or regional arena: ‘The majority of exchanges’, writes recently a scholar who knows this world well, ‘happened on a local and regional level rather than over long distances. Most merchants therefore circulated in limited territories, whose conditions and networks they knew well.’<sup>1</sup> It can be very difficult to see these local movements of goods and people (including people providing services), but sometimes they come into clear focus. The well-known *sympoliteia* agreement between Miletos and its neighbour Pidasa (*Milet* I 3, 149), whose territories abutted each other, includes provisions exempting certain goods like wine produced in the former territory of Pidasa from paying dues when transported to Miletos—a good example of a local trade that surely was already active before the *sympoliteia*. The accounts of the *hieropoioi* of Delos record the names of nearby islanders who came to Delos to work for the sanctuary, or, already on Delos for other reasons, took up employment for the god. The Delians bought bricks made on the island of Syros for sanctuary use.<sup>2</sup> These few examples may perhaps stand in for the millions of similar transactions, across no more than a few dozen kilometres, which have left no record in our sources, but must have constituted, in numbers, the vast bulk of exchange in the Hellenistic world.

Long-distance trade—movement of goods and people—in contrast, has tended to leave more documentary evidence, perhaps exactly because it was more unusual and difficult and so required a more visible infrastructure to

<sup>1</sup> Migeotte 2004: 616.

<sup>2</sup> Marek 1984; *IG* XI 2 161A73-5. For another example, evidently, of a rooftile workshop whose range of distribution was limited, see Intzesiloglou 2000. My thanks to Angelos Chaniotis for this reference.

support it—but also because the generosity of merchants moving bulk goods over long distances who gave away or sold their goods at reduced prices often received honours from the beneficiaries. The considerable quantity of decrees for *proxenoi* (which still await a definitive study) attests to this activity, especially with regard to grain. But we hear also of other goods, as in the second-century BC inscription from Athens in which a merchant is honoured who has engaged in trade in olive oil and wine between Athens and the Black Sea (IG II<sup>2</sup> 903 with Gauthier 1982). We have also some contracts for such long-distance movements, like the (again) well-known one embedded in Ps.-Demosthenes 35 for the movement to the Black Sea of wine produced in various Aegean cities, or the contract preserved on an Egyptian papyrus financing at Alexandria a voyage, anticipated to last a year, to the land of the aromatics, Punt (SB III 7169). Such texts go well back into the Archaic period and extend throughout Antiquity. Long-distance movement of goods is attested also by archaeological evidence, especially the vast quantities of amphoras produced at many centres and distributed all over the Mediterranean world, or ceramics exported for their own sake like Megarian bowls or Eastern Sigillata A.<sup>3</sup>

All this is well known. The question I would like to try to address here is how we might unravel the relations between exchange and economic activity on these different levels. In particular, such a project—which, done thoroughly, would involve far more evidence and argument than I can possibly muster here—needs to consider a series of questions. First, what do we mean by ‘local’, ‘regional’, and ‘inter-regional’?<sup>4</sup> Perhaps the key in this trinity lies in the central term: if we can identify a ‘region’, we can say with some confidence that the local level must consist in economic activities that do not extend over all or much of the region, and inter-regional ones are those that reach outside the boundaries of the region. Second, we need to worry about quantification—to what degree is it possible, at all, to give even a very rough approximation of the burden of economic activity supported on these different levels? (If we were dealing with a modern economy this would surely be the central question, whose answers would shape our views of the other questions.) Third, we need to ask about change over time, the classic historical question—in particular, whether the political and social phenomena that distinguish the Hellenistic world effected changes in the economic systems that typified the eastern

<sup>3</sup> See e.g. Rotroff 1982, 1997; Lund 2005.

<sup>4</sup> For example, on the ambiguities of ‘local’, see Lund 2005: 75–6; ‘local’ pottery as ‘made on the site or within a distance of a few km (say up to a distance of about 2 hours walk)’, Hännestad 2005: 168; for a critique of some aspects of my use of regionalism in Reger 1994, cf. Feyel 341–68; Leveau 2007; for the application of a regional analysis to the economies of the western Roman provinces. Some additional reflections on regionalism appear in Reger 2007c and 2011; I hope to expand on these considerations in a book tentatively titled ‘Region and Network in the Hellenistic Economy’.

Mediterranean before the conquests of Alexander, the establishment of many Greeks and Macedonians in new settlements in Asia Minor, Egypt, and the Near East, the creation of large successor kingdoms like the Seleukid state, and the intervention, after about 200 BC, of Rome.

I have spoken loosely of 'local' and 'long-distance' trade as if these terms were self-evident. Of course that is not necessarily so. What distances define a local as opposed to a long distance trade? While the extremes pose no problem—surely everyone would agree that a farmer who brought honey down from his hives on Hymettos to sell in the Athenian agora was engaged in local commerce, whereas frankincense transported from South Arabia to the same agora had passed through long-distance trade—matters grow much murkier in the middle. Briefly, it would be both invidious and impossible to draw firm lines between these concepts. What counts as 'local' will be influenced by geography, topography, political divisions, cultural practices, and many other factors. Better, I think, to start instead, as suggested above, from the middle: once we have been able to identify a robust region, applicable to a congeries of goods and services (rather than just one or two), we can say with confidence that a good entering from outside that region has come through an inter-regional channel, and that goods that circulate strictly within spaces substantially smaller than the region itself can be regarded as local.<sup>5</sup>

In principle, it seems to me, there are two broad roads that may lead to the identification of a region. First, we can borrow the approaches refined by decades of research by physical, human, and economic geographers. This tack avoids the danger of circularity, since it relies on definitions of 'region' developed, for the most part, without any reference to the Hellenistic (or indeed ancient Mediterranean) world and its economy. It bears at the same time the hazard of all models imported from other periods and disciplines: that it may enforce an artificial and inappropriate set of understandings. But as the editors of this volume have stressed in their introduction (and indeed historians of the Graeco-Roman economy in general have come more and more to accept),<sup>6</sup> models provide powerful analytical tools for dealing with historical periods beset by incomplete evidence and gaps in understanding of social and cultural parameters. It is therefore certainly useful to explore some of the models for identifying regions that the geographers have articulated.

<sup>5</sup> I want to insist that I am not blind to the many challenges that remain unaddressed in this formulation. Not least—and just by way of example—how 'small' does a sphere of circulation need to be to be 'local' rather than 'regional'? Are there 'sub-regional' units below the level of the region and above the level of the local? A good empirical treatment of some of these problems appears in Oliver 2001 and 2006 (also discussed below, briefly), and see the references in n. 4 above. Addressing all these problems here in a thorough way would burst the bounds of this contribution. I hope my readers will understand why I have focused on the aspects of the problem that I have; I hope (as in n. 4) to return to the whole question elsewhere.

<sup>6</sup> Evident in the title of Manning and Morris 2005.

A second approach, more inductive in character, starts from the proposition that economic activity and exchange could be deployed themselves to define a region. Economic geographers have of course certainly not ignored this approach; much of the literature exploring questions of regionalization as opposed to globalization on the one hand, and the erection of national-boundary barriers to trade on the other, begins with specific industries or products. Likewise, studies in evolutionary economics exploit the emergence and expansion of an industry such as auto manufacturing in order to define a sort of regional 'catchment basin' within which suppliers emerge to feed the main industry.<sup>7</sup> In more or less formal ways, archaeologists who study the distribution of specific products, be they unguentaria or Arretine ware, construct such regions. Problems lurk here too. Without a broad range of evidence, one may construct a 'single-product region' applicable to no other object than the one that defines the region. And the distribution of material culture must be embedded, to a greater or lesser extent, in the political, social, and cultural institutions within which it is produced, used, re-used, and discarded.<sup>8</sup>

There is, then, a complementarity to these approaches to finding regions—each has its advantages and drawbacks, so that by trying them out sequentially or simultaneously, it may be possible to arrive at a more robust identification of a particular region, and to develop models for regional economic activity and change that can be tested on different parameters. Such a project, however, lies well beyond the scope of this contribution, whose much more modest goal is to lay out some of these approaches and test them briefly on a few, limited cases. What follows, then, is first a review of some of the models for defining regions that have been employed in geography that might be useful to historians of the Hellenistic economy, and second an attempt to apply the distribution of certain material objects to draw rough boundaries of possible regions—and, by extension, sub-regional (local) and super-regional (inter-regional) economic activity.

## WHAT IS A REGION?

'Regionalism' has been a fruitful concept in geography and economics for a long time and, as I remarked above, has developed a whole armamentarium of models for identifying regions. Among the many criteria that have been used to identify a region, I will review just three here: geography, ethnicity,

<sup>7</sup> On the role of a product, briefly Preusse 2004: 22–31. For the auto industry, see Klepper 2007: 74–80. I address these questions in much more detail in Reger 2011.

<sup>8</sup> See Knappert 2005 and Peña 2007.

and polity. The rationale for exploring these approaches out of many is that they are among the most fundamental in geographic practice. At its broadest, geography encompasses the physical characteristics of a territory and argues that a unity based on the determination of shared physical features defines a region. There has been controversy around, and reaction against, this approach throughout the twentieth century, but in subtle ways it continues to inform the thinking of many geographers. The importance of physical features of the Mediterranean basin in breaking it up into 'regions' or sub-units or one type or another continues to be basic to explanations of the character of its economy.<sup>9</sup> 'Ethnicity' as a determinant of region remains embedded in the conceptualisation of the spaces of Achaia, Aitolia, Ionia—all the territories encompassing a multitude of *poleis* that seem to share certain cultural characteristics (and perhaps a set of physical definitions, like the central Peloponnesian highlands that make up Arkadia). 'Polity' as a mechanism for defining a region is, as we will see, a relatively new approach for geography, but the role that shared political culture has been argued to play in conjuring up a regional identity can be paralleled—perhaps—in the *polis*, and in the greater political entities (federations) that emerge in the Hellenistic period. This review hardly exhausts either the tools we could borrow from geography or the ways that regions have been defined in the Mediterranean world, but these three approaches should serve the purposes stated above: to explore the applicability of these models to the Hellenistic world that interests us.

## Geography

Scholars of the economy of the modern world, who have become increasingly interested in the phenomenon of regionalism, have found themselves grappling anew with the problem of geography as the (or a) necessary condition for defining a region. For some, a region is a geographical entity larger than, and embracing, individual countries but not global, or even hemispheric, in reach. Examples include the European Community, which now encompasses much of the continent; the European Free Trade Association, whose members (Iceland, Norway, Switzerland, and Liechtenstein) do not belong to the EC and do not share borders, and so challenge the geographic definition of a region; the North American Free Trade Agreement, which includes Canada, the United States, and Mexico; the Caribbean Community and Common Market (of particular interest to those of us studying the Aegean); and the

<sup>9</sup> For instance, from Semple 1931, whose 'barrier boundaries' mark out regions of the Mediterranean world, to Horden and Purcell 2000.

South Pacific Regional Trade Cooperation Agreement.<sup>10</sup> Jeffery A. Frankel, editor of a recent volume of essays on economic regionalism, writes:

Most international trade research in the past has ignored the geographic dimension. International trade models, whether empirical or theoretical, whether based on small-country or large-country assumptions, and whatever else their attributes, tended until recently to have one curious thing in common: they treated countries as disembodied entities that lacked a physical location in geographic space. . . . [M]any of the most interesting aspects of regional trading arrangements require the introduction of a geographic dimension. Without it, one can hardly claim to be studying regionalism.<sup>11</sup>

This formulation seems eminently sensible, if only because a 'region' would seem to have to be defined geographically—that is to say, the subcomponents of the region ought all to 'link up' physically. The work of this school of regionalist economists connects with aspects of the long-standing regional approach to geography. This approach is nicely summed up in a recent textbook on the regional geography of North America. Classic regional geography began

with bedrock geology and proceed[ed] through climate, soils, and vegetation. This was followed by a description of all of the forms of economic activity, beginning with the primary ones (agriculture, forestry, mining, and fishing) and then moving to industries that fashioned those products into manufactured goods (the secondary activities). The catalogue continued through service industries, then turned to demographics and urbanization and typically culminated in a discussion of the region's problems.<sup>12</sup>

In this respect the definition of a region parallels the role of geographic contiguity in the formation of *sympoliteiai*—these too demand that their constituent parts adjoin. But one cannot press the analogy too far. While the lack of geographic contiguity provides a strong argument against the view, sometimes expressed, that the Aegean islands of Paros and Thasos were joined for a while in a *sympoliteia*, the sea between them would surely not mitigate against their belonging to the same economic region. (Other factors, like the mother city–colony relationship, may have created additional bonds.)<sup>13</sup> And can 'pure geography', decoupled from human phenomena and institutions, suffice to create a 'region' ripe for exploitation by human economic activity? Consider the Sonoran Desert of the American Southwest.<sup>14</sup> This territory, which straddles the US–Mexican border, can be argued to be unified by

<sup>10</sup> Whalley 1998: 65, Table 3.1 for a complete list of such regional trade agreements as of 1998.

<sup>11</sup> Frankel 1998a: 1.

<sup>12</sup> Hudson 2002: xiii.

<sup>13</sup> See Reger 2004: 148–9.

<sup>14</sup> Hudson 2002: 351–9; Phillips and Comus 2000.



geographic, geological, topographic, climatological, and biological parameters, as the habitat of certain marker species, like the saguaro or the organ pipe cactus. Within it, human cultures exhibit shared features—agriculture practised with irrigation, housing adapted to high summer heat and mild winters, rituals connected with the bi-seasonality of rain. The result is a marked regional unity not only of geography but also of culture, to the extent that—for example—the Native American tribe of the Maricopas, who speak a completely different language from their neighbours the Akimel O’odham and moved into the desert in the 1700s, adopted cultural practices virtually identical to the Akimel O’odham, to the point that the two groups merged and now share a reservation in the US state of Arizona.<sup>15</sup>

In the case of the Aegean basin, an analogous physical region can certainly be identified, typified by a dry Mediterranean climate (with local variations) established on a bedrock geology determined by plate tectonic movements and considerable vulcanism. As a cultural zone it was fairly homogeneous in the Hellenistic period. But it would be very difficult to attribute the cultural features of Aegean populations simply to the geography, as one can at least in part with the inhabitants of the Sonoran desert, since these features appeared also in other places with widely different geological substrates and physical characteristics.

## Ethnicity

Next, let us consider ethnicity as a way to identify a region. This approach, or something like it, has recently been examined by geographers under the concept of ‘homelands’. These scholars have argued for ‘five simple homeland components: *a people, place, bonding with place, control of place, and time*’. The ‘people’ constitute an ethnic group or ‘groups that are self-consciously aware of their differences’. ‘Place’ is territory, which can vary in size considerably—for instance, from the equivalent of a few US counties to several US states. The key component, however, is the ‘bonding with place’: ‘This tie happens when a people adjust to their natural environment, stamp that environment with their cultural impress, and from both the natural environment and their cultural landscape create a deep sense of place.’ Control of place follows from political autonomy and authority over the territory, and time, finally, is the dimension in which all these factors unfold—a homeland cannot be created instantly.<sup>16</sup>

<sup>15</sup> Trimble 1993: 386–8.

<sup>16</sup> Nostrand and Estaville 2001b: xviii–xxi, quotations from xxviii (emphasis in original), xix.

These criteria for the definition of a 'homeland' will ring very familiar to Greek historians—they sound like the very definition of a *polis*, along lines that scholars have been working now for many years.<sup>17</sup> However, for geographers of homelands, the entities they call homelands are typically considerably larger than *poleis* and need not be politically unified—that is, political control is necessary, but it need not be political control by a single authority over the entire territory of the homeland. The New England states of the United States present a bewildering variety of political jurisdictions, but meet the criterion because their inhabitants control their own territory.<sup>18</sup>

Leaving aside the *polis*, we may perhaps look at two possible Aegean territories that might qualify, in varying degrees and for varying reasons, as 'homelands' or ethnically defined regions. First, consider the islands of the central Aegean. They share many geographic features—small size, dependence on seafaring—but differ too in many ways. But one particularly interesting feature of the islands might be found in the ways that Kykladic islanders saw themselves as constituting 'islanders' rather than inhabitants of individual *poleis* on particular islands. This topic has been explored recently by Christy Constantakopoulou.<sup>19</sup> She has stressed the mechanisms that created a sense of island-wide identity on Aegean islands that supported more than one *polis*. These mechanisms included the use of island (as opposed to *polis*) ethnics, minting island coins, participating in island-wide cult, and the propensity of many to indulge in federations. That the Athenians assessing tribute in the fifth century BC often treated these islands as units may indicate that outsiders appreciated the force of such self-identification. A harder question is whether the islanders in question also saw themselves more broadly as a 'region of islands' (as opposed to, say, a 'region' consisting of a single island with its two or three independent *poleis*). It may be, as I have suggested elsewhere, that the creation of an Island League in the late fourth century under first Seleukid and then Ptolemaic sponsorship did move the islanders to a better defined sense of themselves as a region. But the problem of economic regionalism remains to be considered; even if islanders saw themselves as a kind of ethnic region (or 'homeland'), did they experience also the economic linkage necessary to support a region? Developing a response to this question would be especially revealing, as there seems to be general agreement that the Kykladic islands indeed did form a 'regional Aegean-Kykladic or Aegean market around Delos', as Alain Bresson concludes in an important new re-examination of the price histories of goods on Delos.<sup>20</sup>

<sup>17</sup> See e.g. the discussion of a 'Greek homeland' and its 'regions' in Hansen 2004: 4; for some of these same criteria as criteria for identifying a *polis*, Hansen 2004: 55–80, 115–19.

<sup>18</sup> Bowden 2001; cf. Hudson 2002: 45–61.

<sup>19</sup> Constantakopoulou 2005.

<sup>20</sup> Reger 270; Bresson 2006, quotation at 333.

Another region we might consider is Karia.<sup>21</sup> The Karians are mentioned by Homer but first really appear on the historical stage with their role in the Ionian Revolt of the early fifth century BC. Herodotos reports their political organization, shared cult, and language. These features can be traced throughout the Hellenistic period—although the written evidence for their language ceases in the early Hellenistic period—in the face of violent changes in hegemony (as in the contest in the third century between the Ptolemies and the Seleukids for control of Karia, the period of Rhodian control, and eventually incorporation into the Roman polity) and dislocations in religious life. The territory of Karia, considered as a region, enjoyed its unity because it was occupied by a self-identified and self-identifying group. The boundaries of Karia as a region—the Maiandros river on the north, the sea to the west and south, and the highlands separating it from Lykia on the east—were products more of that ethnic homogeneity than of some irresistible topographic determinism. Indeed, some scholars have suggested a difference between western and eastern Karia, the result perhaps of differing political trajectories.<sup>22</sup> Be that as it may, Karia seems a good example of a region built on an ethnic and cultural base, indeed a ‘homeland’ in the sense of the geographers mentioned above. But even if this is right, it does not necessarily mean that Karia was a unified *economic* region.

What might constitute evidence for such a regional economic unity? One obvious possibility, which is likewise a strong marker for modern economists of an economic region, would be currency unity. For this in Hellenistic Karia there is some evidence. From about 225 to about 190 BC, most Karian cities seem to have relied for their coinage not on locally produced coins but on Rhodian coins struck on a reduced ‘Rhodian’ standard of about 2.8–2.5 gr/dr. About 190, the Rhodians instituted a monetary reform by introducing the so-called *plinthophoroi* struck to a the full ‘Rhodian’ standard of 3.4 gr/dr and with new types. In response, many Karian cities began to strike coins of their own, using the pre-existing Rhodian types and weight standards.<sup>23</sup> If this reconstruction of the facts is correct, it suggests the possibility of a regional economy in Karia, demarcated in part by the use of a standard currency, which would have facilitated movement of goods and services within the region. It is notable that this region apparently did not include the island of Rhodes itself, for the Karians felt no need to follow the Rhodians in their new currency. Of course, the Rhodians penetrated Karia in many other ways during the later third and second centuries. A thorough exploration of whether Karia (or part of Karia) constituted an economic region would require consideration of all those factors as well.

<sup>21</sup> See Reger 2007b.

<sup>22</sup> A suggestion of Andrew Meadows; see Ma 39.

<sup>23</sup> Ashton and Reger 2007.

## Polity

For John Hudson, the geographer of North American regions quoted earlier, political entities, which do not figure in classical regional geography, assume importance next to geology and the physical features of regions because 'it is not the mere presence of a given physical environment, various natural resources, or certain cultural groups, that define regional character; rather, it is actions undertaken for a purpose, by groups and individuals, that have shaped the distinct landscapes that each generation leaves in modified form to the next'.<sup>24</sup>

In a wide-ranging and nuanced recent argument, Graham Oliver identifies sub- (or micro)-regional differences of various kinds as between different parts of the larger Attic territory, including the ways in which the Peiraieus 'devolved' in the later third century into a virtually separate *polis* on Attic territory.<sup>25</sup> But whether the resultant 'micro-regionalism' of Attica in social practices and institutions plays out also into 'micro-regionalism' in economic activities remains less obvious. In general, perhaps the most important ways in which single political control might create an economic region follow from the regularization of economic institutions. Common currency, standardized weights and measures, equal taxes, unified legal and judicial systems—such institutional standardization typically plays a role in facilitating economic activity, and this kind of standardization was certainly an important consequence of polity unification in the Hellenistic world. One need only recall the provisions in many *sympoliteia* agreements to harmonize institutions like taxation to see how the creation of a single polity might transform barriers into links.<sup>26</sup>

Clearly, there are many paths to regionalism, and not all terminate in the same space. The models provided by geographers and historians for other periods can, however, serve at least as guides to thinking about identifying regions in the Hellenistic world, and asking whether regions so identified—whether as ethnic homelands, topographic entities, or polities—correspond in any way to regions as economic entities. The conversation here must run in both directions at the same time, trying to find regional identity by both

<sup>24</sup> Hudson 2002: xviii.

<sup>25</sup> Oliver 2006; see also Oliver 2001.

<sup>26</sup> These considerations link up with the recent interest among historians of the Hellenistic and Greco-Roman economies in applying the 'new institutional economics' developed by Douglass C. North and his followers to the task of understanding pre-modern economies, particularly in the emphasis this school of thought places on transaction costs; see Bresson 2007: 26–9, for a clear summary (Bresson's analysis rests in part on the application of this view); see also Frier and Kehoe 2007 and Lo Cascio 2007: 626–7. The reduction of transaction costs (by removal of tariff and regulatory barriers, for instance) is also a central emphasis of scholarship on the 'new regionalism' in the contemporary world: see, for example, Preusse 2004: 1–19.

non-economic and economic criteria. Finally, we must, at some point, be willing also to accept a certain imprecision: it will rarely if ever be possible to draw sharp lines on the ground to separate 'inside' a region from 'outside'. Where those lines lie will depend always on the choices we make for diagnostic criteria, and will change as we change the optic through which we look. At the same time, I am confident that, with these caveats in mind, we can talk sensibly about regions and look at economic flows within and beyond regions defined on other terms.

## TESTING REGIONAL AND INTER-REGIONAL TRADE

How do we know when a set of trading relations constitutes a region, and how do we know when a trading relationship moves beyond a region to constitute inter-regional trade? It may seem obvious that trade over a very long distance must be inter-regional—say, grain transported from the Black Sea to Athens, or from Kyrene to the *poleis* of the Aegean in the late fourth century.<sup>27</sup> It is less obvious, however, if the question concerns an Athenian Hellenistic bowl found at Corinth—is this an example of regional trade or inter-regional trade? And are regions the same for different goods or over time? It seems reasonable to suppose, at least as an hypothesis, that the physiognomy of a region (whose boundaries also must surely be indistinct) may be determined by many factors that can change. Routes of movement may link two distant sites but separate two closer ones (sea links vs. land links, for example). Technology may change those routes—whether the creation of a new route, say the Via Egnatia in northern Macedon, which may have fostered trade connections and linked small towns just off the road to a wider network; or the development of a new technology of transportation, like the camel.<sup>28</sup>

I have already mentioned the possible role of pre-plinthophoric Rhodian coinage in creating an economic region in Karia. We may explore this approach a little further by looking at the distribution of coins produced in the Hellenistic period by Miletos. Hellenistic Miletos was certainly an important city in Ionia, and maintained tight connections with some at least of the colonies which Milesians had founded in the Archaic period. Its location put it astride busy trade routes along the Asian littoral and near the turn by Knidos that led to the sea lanes to Rhodes and beyond, along the south Asian coast to the Levant. But Miletos did not have the cachet or reach of its neighbour Rhodes, whose local authority enjoyed considerable expansion in the first half

<sup>27</sup> Braund 2007; RO no. 96.

<sup>28</sup> Lolos 2009; Bulliet 1990.

of the second century, and Miletos was engaged for many years in local struggles with its neighbours over territorial expansion and local power. However one reads the history, Miletos should surely be regarded in the Hellenistic period as essentially a local south-Ionian west-Karian state. What then might the distribution of its coins suggest about links between Miletos and other parts of the Aegean and Mediterranean world? In particular, can these distributions delineate, even roughly, boundaries of regional or inter-regional trade networks?

We can begin with a local coinage distinguished by a head of Apollo (sometimes full figure) on the obverse and a lion on the reverse, in didrachmas, drachmas, and fractions, in silver and bronze, struck by the Milesians in the later third and second centuries.<sup>29</sup> This coinage is surely that called 'Milesian' or 'epichoric' in inscriptions. Only seven hoards have produced examples, and three of these do not have a good provenance beyond 'Turkey' (or, in one case, 'south-west Turkey'; see Fig. 17.1).<sup>30</sup> Three of the four hoards with good provenances come from the immediate vicinity of Miletos: one from Kalymna, with five bronze hemiobols; one from Priene, with one bronze hemiobol; and one from the Sacred Way between Miletos and Didyma, with eight bronzes.<sup>31</sup> It is unfortunate that the real abundance of these coins comes from hoards whose provenance is unknown. *CH* 7. 89 (which may be the same hoard as *CH* 5. 38) contained 40 drachmas, and *CH* 8. 474 one didrachma, 215 drachmas, and 289 hemi-drachmas. The only other coins in this hoard were four Athenian tetradrachmas and 12 small fractions from Herakleia by Latmos, which may imply an origin at or near Miletos. *CH* 7. 89 contained only Milesian coins and so likewise may perhaps have come from very near the city.<sup>32</sup> It is absolutely clear that this coinage did not circulate to any important degree outside the immediate vicinity of Miletos—that it was largely 'local' coinage but with a small 'regional' reach, if we may see a 'region' in the territory of Miletos itself and its immediate neighbours like Kalymna and perhaps Herakleia by Latmos.

Other instances of such apparently 'regional' coinages exist. For instance, several Kykladic islands, including Naxos and Paros, produced new silver coinages in the late third/early second century BC. Like the Milesian coins just mentioned, these too appear mostly in hoards from nearby locales—most notably from various locations on Euboea (*IGCH* 210, 226) and on the islands themselves. These coins belong to the many series of coins struck starting after c.225 BC, when the Alexanders that had been 'common currency' started to wear out and disappear, but what is important for our exercise here is that they

<sup>29</sup> See Marcellesi 178–83 for catalogue and details of types.

<sup>30</sup> *CH* 5. 38, and 8. 474; 7. 89.

<sup>31</sup> *IGCH* 1351, 1331; *CH* 8. 520. The fourth hoard, *CH* 8. 358, with a single coin, comes from Lechaina in the western Peloponnesos.

<sup>32</sup> Kinns 1998 on *CH* 8. 474 and Kinns 1986: 236 with n. 3 and 255 n. 59 on *CH* 7. 89 and 5. 38.

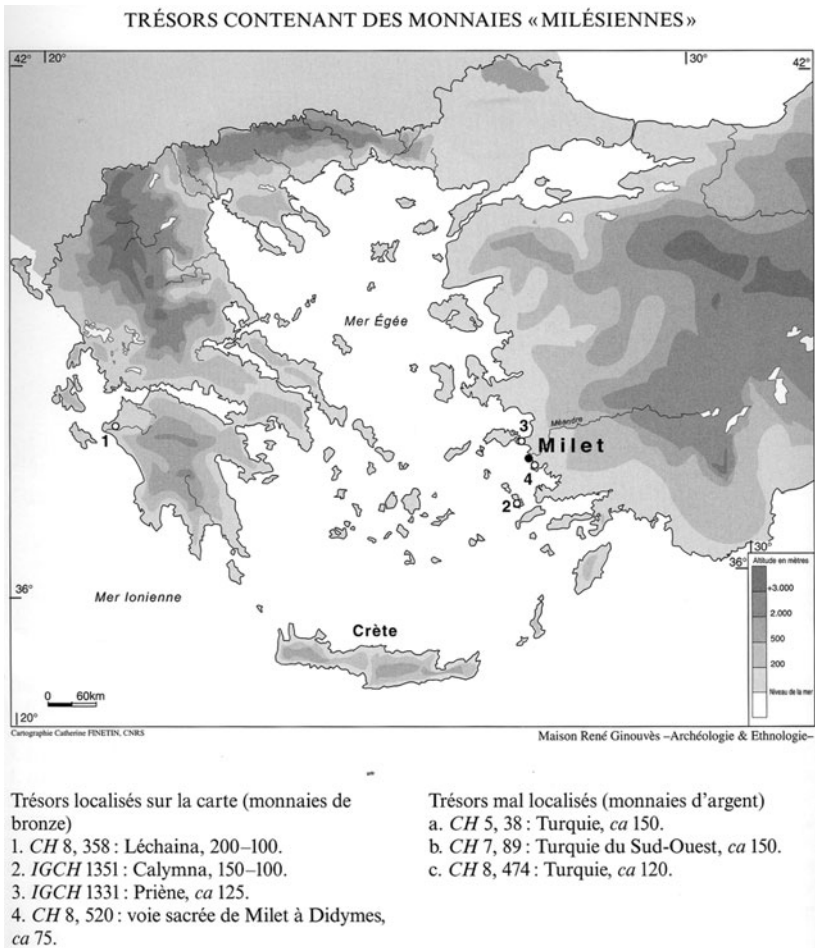


Fig. 17.1. Distribution of Milesian epichoric coins (after Marcellesi 2004, Carte 5)

do not lay any claim to currency beyond the immediate vicinity—that is, they look like a regional phenomenon.<sup>33</sup>

A striking contrast appears in the Alexanders in gold and silver issued by the Milesians as staters, tetradrachmas, and drachmas, in the decades following c.325 BC.<sup>34</sup> The Alexanders struck as gold staters are known from hoards

<sup>33</sup> See Reger 2007c, with references.

<sup>34</sup> In her recent book (Marcellesi 2004, see Abbreviations), Marie-Christine Marcellesi has collected the data on coin circulation and compiled them conveniently on six maps. I recognize that her dating and interpretation of the numismatic evidence have sparked debate, but for my purposes I will sidestep these issues to consider broadly the patterns (if any) that the distributions and broad dates suggest. It should however be borne in mind that the details are open to dispute.

found in Greece, Macedon, and the territory west of the Black Sea. Only one hoard from Asia Minor—*IGCH* 1369, from Kirazli on the Black Sea—has yielded a stater; examples have also come from hoards found on Cyprus and in Palestine (*IGCH* 1472 and 1508). This distribution seems to confirm the view expressed by several scholars, notably Margaret Thompson, that these coins were struck as payment for soldiers on discharge from the army. If this view is correct the gold staters should be excluded from any argument about regional networks of economic activity; they reflect rather military matters and the origins of troops.<sup>35</sup>

The distributions of the Alexander tetradrachmas and drachmas, on the other hand, are more intriguing. Five hoards yielded ten or more tetradrachmas. (Some of these, and others that contained fewer than ten tetradrachmas, produced large numbers of drachmas, discussed below.) Of these five, three come from Egypt (*IGCH* 1664, 1670, and 1678) and contained together 97 coins. The other two were found in Phrygia (*IGCH* 1410, with 22 examples) and Kilikia (*CH* 7. 80, with 17). The distinctive aspect of this distribution is the strong presence of tetradrachmas in Egypt. Marie-Christine Marcellesi remarks cautiously, 'Should this difference in circulation be explained by use [of the tetradrachmas] for payments different [from those to discharged soldiers]? Or is it one of the markers of a movement often noted, in the Achaemenid empire and then in the Seleukid, of coined silver toward the east? The question remains open.'<sup>36</sup>

The Alexander drachmas appear in 41 hoards. While the distribution includes Greece itself, the Danube region, Cyprus, Syria, and Mesopotamia, these 21 hoards include not more than 4 per cent of the Milesian coins. The vast majority, about 95 per cent (1,067 coins), come from Asia Minor.<sup>37</sup> But even within these hoards, the numbers of Milesian drachmas vary radically. In only six hoards were more than seven present.<sup>38</sup> Of these, the provenance of one hoard is not known, except as coming from Asia Minor (*IGCH* 1437, which also has the fewest drachmas of this group at 11). Of the remaining five hoards, two (*IGCH* 1395 and *CH* 8. 268) are from Phrygia, a region that has produced additionally a hoard with seven drachmas from Gordion (*IGCH* 1401) and four others each with a handful of drachmas (*CH* 1996: 80, 81, 82, 83). Two further hoards with abundant drachmas come from Kilikia (*IGCH* 1423; *CH* 7. 80). The fifth (*IGCH* 1369) was found near Amasya on the central Black Sea coast. Equally striking perhaps is where the Milesian drachmas are rare, or not found at all. Hoards containing a coin or two are known from Greece, Cyprus, and a string of sites extending east from Kilikia into Mesopotamia (see Fig. 17.2).

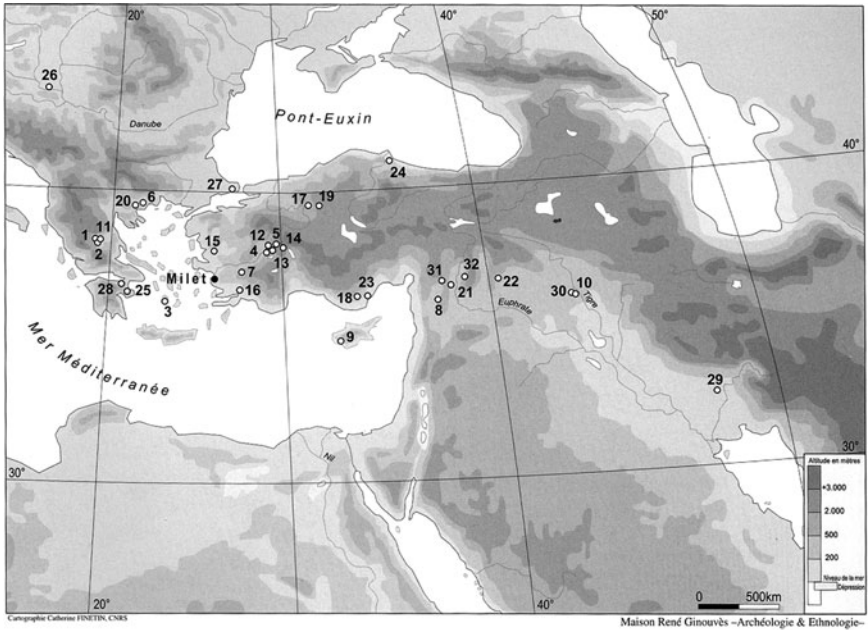
<sup>35</sup> Marcellesi 89–90.

<sup>36</sup> Marcellesi 91–2 (my translation and expansion).

<sup>37</sup> The numbers do not quite add up because I omit one hoard (Davesne-Lemaire, *Rev. num.* 1996 no. 2) of unknown provenance.

<sup>38</sup> *IGCH* 1395, 82; *IGCH* 1437, 11; *IGCH* 1423, 90 (and 4 tetradrachmas); *CH* 8. 268, 33; *IGCH* 1369, 47 (and one stater and one tetradrachma); *CH* 7. 80, 93 (and 17 tetradrachmas).





Trésors localisés sur la carte

1. *CH* 1, 27: Thessalie, ca 323.
2. *CH* 2, 51: Thessalie, ca 323–320.
3. *IGCH* 91: Siphnos, 320–300.
4. *IGCH* 1395: Sinanpaşa, ca 318.
5. *CH* 1996, 80: Eğret, ca 317–300.
6. *IGCH* 414: Drama?, ca 310–305.
7. *IGCH* 1283: Aphrodisias, ca 305.
8. *IGCH* 1516: Alep, ca 305.
9. *IGCH* 1471: Nea Paphos, ca 305.
10. *IGCH* 1758: Mossoul, ca 305–300.
11. *IGCH* 133: Thessalie, 300–290?
12. *CH* 1996, 81: Dandırı, ca 300–290?
13. *CH* 1996, 82: Eynihan, ca 300–290?
14. *CH* 1996, 83: Yılanlı, ca 300–290?
15. *CH* 1996, 84: Çullugöre, ca 300–290?
16. *IGCH* 1292: Muğla, ca 280.
17. *IGCH* 1401: Gordion, ca 280.
18. *IGCH* 1423: Armenak?, ca 280.
19. *CH* 8, 268: Haymana, ca 280.
20. *IGCH* 455: Pergé, ca 250–230.
21. *IGCH* 1534: Bab, 250–200.

22. *IGCH* 1763: Tell Halaf, ca 246–240.
23. *CH* 7, 80: Meydancikkale, ca 240–235.
24. *IGCH* 1369: Kirazlı, ca 230.
25. *IGCH* 179: Sophikon, ca 225–215.
26. *IGCH* 458: Zemun, ca 220.
27. *IGCH* 867: Büyükçekmece, ca 220.
28. *IGCH* 187: environs de Corinthe, ca 215.
29. *IGCH* 1799: Suse, ca 210–200.
30. *IGCH* 1768: Mossoul, ca 200.
31. Oylum Höyüğü, ca 200–195.
32. *IGCH* 1772: Urfa, 185–160.

Trésors mal localisés

- a. Proche-Orient ou Asie Mineure, ca 322.
- b. *IGCH* 1437: Asie Mineure, ca 321.
- c. *IGCH* 1444: Asie Mineure, ca 305–300.
- d. *CH* 7, 60: Thrace, ca 300.
- e. *IGCH* 1445: Asie Mineure, ca 300.
- f. *CH* 2, 60: Asie Mineure, ca 300–290?
- g. Provenance inconnue, ca 260–230.
- h. *IGCH* 1447: Asie Mineure?, ca 240.
- i. *IGCH* 1769: Mésopotamie, ca 195–190.

Fig. 17.2. Distribution of Milesian Alexander drachmas (after Marcellesi 2004, Carte 4)

Except for a hoard from Siphnos which yielded one coin,<sup>39</sup> no Milesian Alexander drachmas are known from any of the Aegean islands, including the Dodekanesoi just off the Milesian coast. Marcellesi suggests: 'This important distribution in Asia Minor would tend to confirm the notion that specialization of the mint in Miletos and nearby mints came from former practices of the region, and that the drachmas were destined to remain there.'<sup>40</sup>

It is hard to draw any firm conclusions about regional and inter-regional trade networks from these data. On the one hand, the Milesian Alexanders belong to the mass of coinage in the type of Alexander and struck on the Attic standard that served as the 'international' coinage for the Aegean world from the late fourth century to the late third century.<sup>41</sup> We cannot say whether consumers distinguished among coins struck at different mints as long as they bore the image of Alexander and were of good weight. Thus Milesian Alexanders may have changed hands many times, and passed through many markets, before coming to rest in the hoards from which they were recovered in modern times. At the same time, the Alexander drachmas do suggest possible patterns of distribution. They appear very strongly in Asia Minor, and within Asia Minor are concentrated in Phrygia and Kilikia. Phrygia lay east of Miletos on the great road running up the Maiandros river valley and into central Asia Minor. Kilikia straddled the sea route that ran along the south coast of Asia Minor to the Levant.

A recent study of coin finds on the island of Kos provides a nice converse to our look at the distribution of Milesian coins. Coins from this island display a very strong regional bias: fully 46 per cent of known foreign coins come from either Karia or Ionia; with two exceptions, coins from other parts of the larger Aegean and Greek world (six areas in all) make up less than 15 per cent of the total. The two exceptions are meaningful: 26 per cent of the coins come from Ptolemaic Egypt and 15 per cent from Macedonia. Kos enjoyed close relations with Egypt in the Hellenistic period, and was involved as well with Macedonia. These distributions suggest it would be worthwhile to consider Kos as situated first within a regional context that embraced Karia and Ionia, and then as having extra-regional connections with Egypt and, to a lesser extent, Macedonia.<sup>42</sup>

It may be useful to compare the distribution of Milesian coins with another possible product of the same general area, the so-called dome-mouth *unguentaria*.<sup>43</sup> While the exact production site remains unknown, it seems very likely that these unguentaria were made near Knidos in south-western Karia. They

<sup>39</sup> IGCH 91 with Price 1991: no. 2090 = Marcellesi no. 16.

<sup>40</sup> Marcellesi 9 (my translation).

<sup>41</sup> See the summary at Reger 2005a: 347, and 2007a: 471-2.

<sup>42</sup> Gianikoure and Stephanake 2006, with especially 110 fig. 1.

<sup>43</sup> See Dotterweich 1999. I discussed these objects in a different context in Reger 2005b: 276-7.

Abb. 1: Verbreitungskarte

- 1 Knidos
- 2 Mylasa
- 3 Telmessos
- 4 Kaunos
- 5 Nisyros
- 6 Rhodos
- 8 Lindos
- 9 Nea Paphos/Palaipaphos
- 10 Klima
- 11 Marion
- 12 Ormidhia
- 13 Kourion
- 14 Dora
- 15 Alexandria
- 16 Berenike
- 17 Kommos
- 18 Knossos
- 19 Delos
- 20 Athen
- 21 Korinth
- 22 Thasos
- 23 Tomis

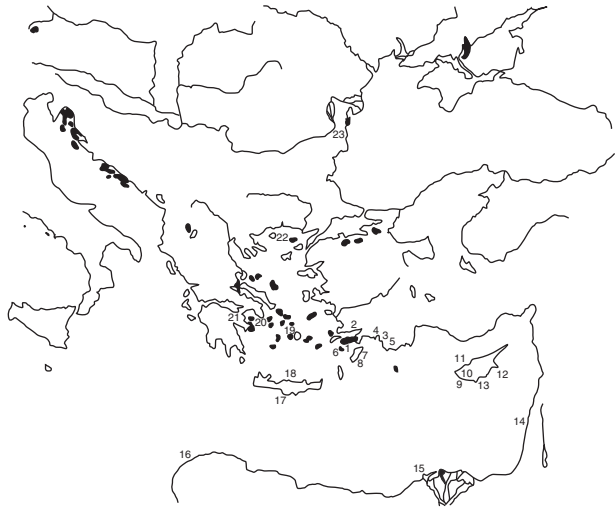


Fig. 17.3. Distribution of Dome-mouthed unguentaria (after Dotterweich 1999, Abb. 1)

are found along a line stretching almost east and west from Dora in Palestine, Cyprus, along the south coast of Asia Minor, on Rhodos and the Dodekanesoi, Crete, the central Kyklades, and Athens and Corinth in Greece. Outlying examples have turned up at Alexandria and Berenike, on Thasos, and at Tomis in the Black Sea (see Fig. 17.3). By far the largest numbers have come from Knidos (44) and Cyprus (28); the next most abundant findspots, Nisyros (5), Rhodos (4), and Crete (4), have yielded far fewer. This pattern may be related to the history of scholarship on these objects, for the type was first identified from Cyprus, and the most recent study started from Knidian examples. But the distribution pattern remains quite striking, following as it does a well-known sea-route from eastern Greece, through the central Aegean, to Karia, and along the southern Asia Minor coast to the Levant. It bears some resemblance to the distribution pattern for the Milesian Alexander drachmas, except for the notable absence of the unguentaria at sites removed any distance from the sea—like Phrygia in Asia Minor, and Syria and Mesopotamia.

Finally, we may consider one last object—Eastern Sigillata A ware. This pottery, recently examined by John Lund, whose work I follow here, was probably produced not in southwestern Asia Minor like Milesian coins and dome-mouthed unguentaria, but in the Levant, perhaps exactly at Rhosos near Seleukeia. Lund has mapped the distribution of this ware in the second half of the second century (it was first produced c.150 BC) through the end of the Hellenistic period (Figs. 17.4–5). The distribution of the pottery follows two chief axes—one south along the Levantine coast, from the presumptive

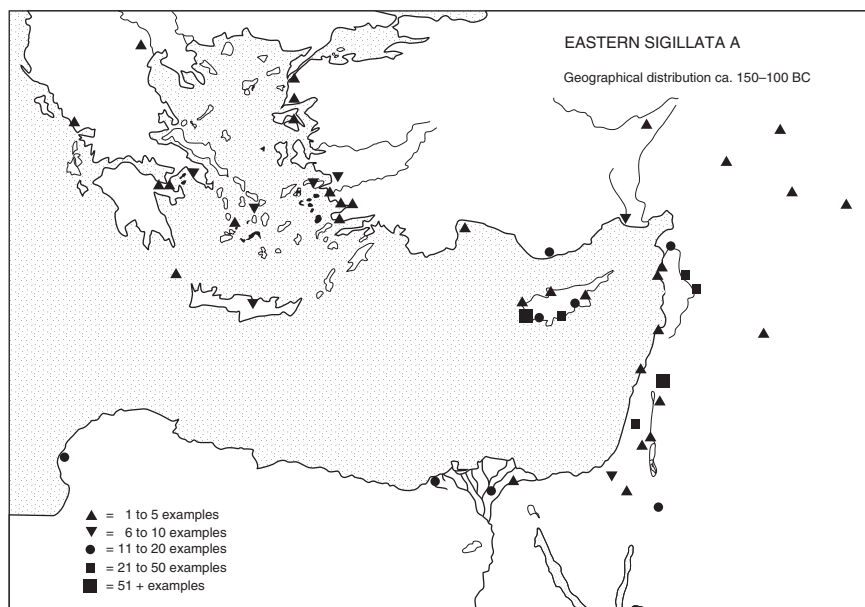


Fig. 17.4. Distribution of Eastern Sigillata A, 150–100 BC (after Lund 2005, Fig. 10.4)

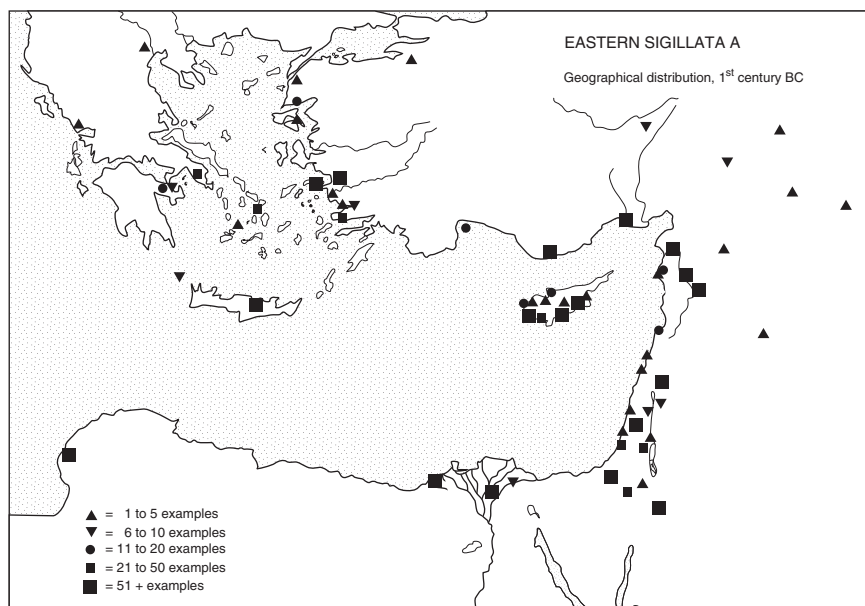


Fig. 17.5. Distribution of Eastern Sigillata A, 100–31 BC (after Lund 2005, Fig. 10.5)

production centre at Rhosos, and on to Egypt, the other west along the south coast of Asia Minor into the Aegean world (including the west coast of Asia Minor, Crete, and Greece). A few examples appear far inland in Syria, but the majority come from sites near the coasts. This pattern does not change appreciably over time, but the number of examples rises in Egypt, Crete, and at sites on the western coast of Asia Minor. About the distribution Lund remarks justly that ‘its circulation was determined more by geography and time-honoured trade routes than by political boundaries’.<sup>44</sup>

### SOME FINAL THOUGHTS

What can we conclude from our rapid examination of models for identifying regions borrowed from geography and of putative economic regions defined on the basis of the distribution of three items? Obviously, such a limited database debars any firm conclusions. But perhaps we can say just a few words about regional and inter-regional economic activity and about the larger prospect of identifying robust, coherent regions.

First, currencies seem as though they might make useful indicators of regional boundaries and inter-regional connections. Locally produced currencies aimed at local markets travelled beyond the political boundaries issuing them, and the fact that people thought it worthwhile to bury them in hoards implies they held value outside their polity. But the examples we looked at—hardly representative—did not travel very far: they may indeed mark a region, or perhaps better, a candidate for a region, testable by other criteria.

Second, the movement of locally produced ‘international’ currencies and the frequency with which they appear in geographically localised hoards may hint both at inter-regional connections and the channels through which the coins (and goods?) moved, and at regions, in the form of geographically restricted locations of hoards with high numbers, as for the Milesian Alexander drachmas in Phrygia and Kilikia. Something of the same thing may perhaps be read out of the distribution of the ceramics at which we glanced. The fact that both are far commoner finds near the place where they were produced (hence the puzzlement over the dome-mouthed unguentaria, which seem by their frequency distribution to have been made both near Knidos and in Cyprus!), may reflect a heavy regional distribution. Both also appear in far smaller numbers distributed

<sup>44</sup> Lund 2005: 241. I am very grateful to the editors of this volume for the invitation to participate in the conference where an earlier version of this chapter was presented. I benefited from the discussion my paper provoked, particularly comments from John Lund and Bert Van der Spek. Later input from the editors and the anonymous reviewer for the Press catalysed substantial improvement and clarification (I hope).

along lines that make sense from other evidence as important routes of trade, and so potentially as the links establishing inter-regional relations of trade. The roughly similar distribution of our two unrelated types of ceramics is especially intriguing, since they were produced at different points on those routes but ended up in many of the same general places—suggesting that we are indeed looking at a real inter-regional phenomenon.

The models for the identification of regions borrowed from geography may help in another way. They offer mechanisms for finding regions independent of economic activity and material culture, regions which can then be compared with the regions reified in coins or pots. We can then ask whether regions as defined by non-economic parameters correspond to economically defined regions, and if not what that may mean for understanding the interrelations in the Hellenistic world among social, cultural, and economic activities. Conversely, regions assembled on the basis of geography, ethnicity, or polity (or other parameters not examined here) can offer grounds on which to look for evidence of regional economic integration. Thus the approaches derived from the work of geographers and Hellenistic historians and archaeologists may conjoin to limn a richer, more nuanced picture of economic activity and change over time.

Much has escaped our optic in this review. I have said nothing about quantification; nothing about the drivers of inter-regional trade; nothing about the role of warfare; nothing about the emergence of major new centres of economic magnetism like Alexandria and, ultimately, Rome. Nor have I tackled the very important but very difficult topic of the degrees to which, and the ways in which (if any), the Hellenistic period was marked by changes in features of economic regionalism and inter-regional trade vis-à-vis the Classical period or the Roman state that followed. But I hope I have shown—as archaeologists have long known—that regional analysis can point to patterns in the economies of the Hellenistic period, and that the identification of regions on the basis on non-economic factors can serve as a test of the ‘reality’ of regional entities—and thus regional and inter-regional trade—constructed on economic criteria alone.

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## Animal Husbandry in Ptolemaic Egypt

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The broader subject of this chapter is animal husbandry during the three hundred years of Ptolemaic rule in Egypt (332–30 BC). More narrowly, however, my concern is with the role of the settlers, mainly Greek military settlers known as *cleruchs* (*klêrouchoi*), in promoting stock-rearing alongside the cereal production which continued to represent the main agricultural wealth of Hellenistic Egypt. In this investigation I wish to acknowledge the input of my Leuven colleague Willy Clarysse, who has deciphered many of the texts exploited here. Over the years we have shared thoughts and views to the extent that it is hard now to separate out responsibility for these; some of the questions treated below are likely to have originated with Clarysse.

Documentary evidence survives among the papyri mainly from the third and second centuries BC, when settlement on the land was promoted by the crown as a means both of rewarding members of the Ptolemaic army and of tying them to their new home. The settlers, and especially those *cleruchs* who settled in the Lake District of Middle Egypt (the Fayum),<sup>1</sup> played an important part in the expansion of the agricultural area and in the development of crop production, which both at home and through export played a key role in the success of the Ptolemaic economy. Here I shall argue that animal husbandry was a further source of wealth, for both the settlers (in terms of income) and the crown (in terms of tax revenue). Furthermore, the development of animal husbandry played a part in the progressive monetization of Egypt which is a feature of this period. Finally, I shall suggest that this particular economic activity met the demands of the urban centres of Egypt, which both grew and underwent economic development during this period. In towns, as part of this process, the manufacture of woollen cloth and carpets in new urban establishments based on slave labour now took its place besides the more traditional forms of rural household production. In all of this, the role of the settlers was crucial.

<sup>1</sup> For the Fayum, the later Arsinoite nome, as the Lake District (*Limnē*), see *P.Rev.* 31.12, 69.2, 71.5, 72.12 (259 BC); Derda 2006: 13–14.

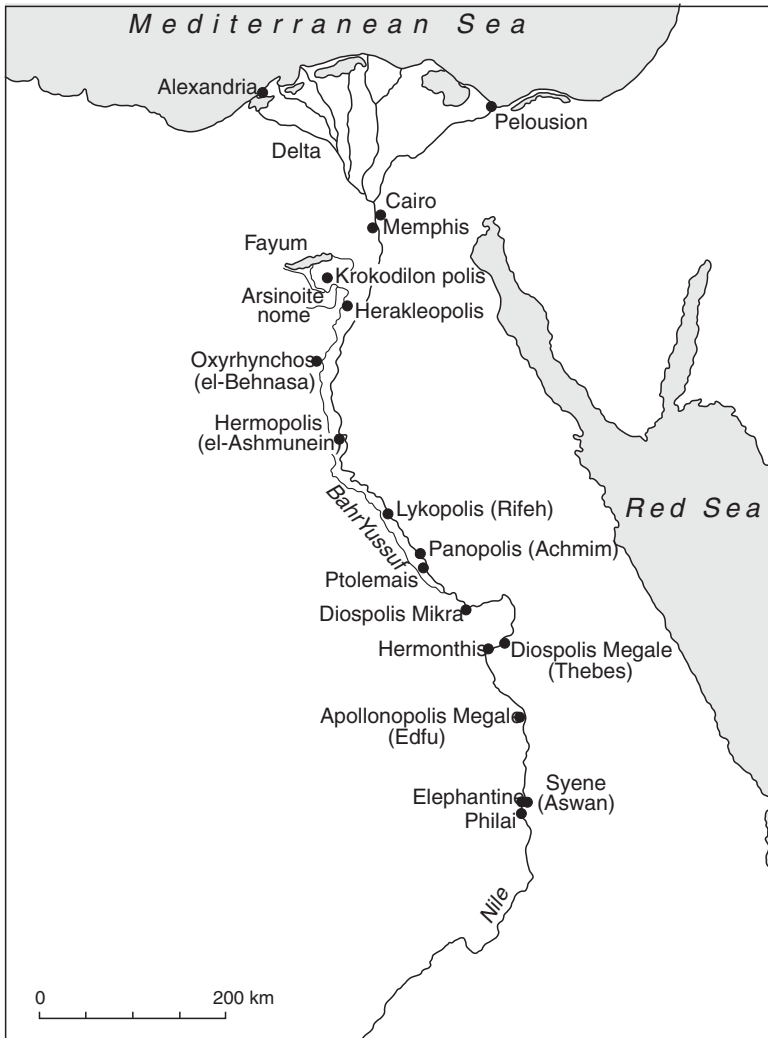


Fig. 18.1. Ptolemaic Egypt

Many forms of animal rearing are to be found in Ptolemaic Egypt. This chapter is primarily concerned with small animals that were herded—above all sheep and goats<sup>2</sup>—rather than the cattle or draught animals (above all donkeys) which played an important role in agriculture and in transport throughout the period. Pigs too are ignored in the current study.<sup>3</sup> Their

<sup>2</sup> See Schnebel 1925: 213–328; Clarysse and Thompson 2.219–25.

<sup>3</sup> Pig-rearing is already discussed by Thompson 2002 and Clarysse and Thompson 2.208–17; more recent studies include Meyer et al. 2004.

relevance, however, is twofold: as an animal which can play a part in land reclamation—in grubbing up the undergrowth and scrub—and as an innovation, certainly in scale and probably also in type, that came with the settlers and helped to meet some of their needs in both religious and culinary terms. For, like sheep and goats, pigs were important for food.

What follows is based in the main on papyrological evidence, on documents surviving from Hellenistic Egypt that have been preserved either in grouped finds (regularly if somewhat misleadingly known as ‘archives’) or else, and more commonly, recycled into the *papier mâché* of mummy casing known as cartonage. The archaeologists of Graeco-Roman Egypt have to date provided little in terms of faunal remains; we lack the detailed studies available from elsewhere.<sup>4</sup> It would not yet be possible to write the sort of study for Hellenistic Egypt that Melinda Zeder published in 1991 for the early Near Eastern society of Greater Mesopotamia. Yet even in that detailed and well-worked archaeological study, the addition of texts to the picture adds a further dimension.<sup>5</sup>

Information on sheep and goats comes in two main forms: there is the government angle, the official declarations of stock that were required by the central authorities keen to raise taxes, along with the subsequent lists prepared by those involved in tax-collection. Then, from the side of the stockholders, comes the private correspondence, the complaints, records, and accounts from various sources but particularly from the Zenon archive—the papers, that is, of one Zenon who acted as manager of the 10,000-aroura (2,750-hectare) North Fayum gift-estate of the long-serving finance minister Apollonios under Ptolemy II. The effects and scale of animal husbandry may also be gauged from the land surveys and crop reports that survive from various parts of Egypt; here again it is the official record that survives. The material to be exploited here is mainly of the first category, the official record, and much of it is written in Egyptian demotic. Scholarly use of the demotic texts of Ptolemaic Egypt lags far behind that of Greek texts, and one of the aims in this study is to draw attention to the wealth of this material.<sup>6</sup>

My first contention is that stockholding played as important a role as did regular agriculture in the economic lives of the military settlers (the cleruchs) of Ptolemaic Egypt. However, before turning to the sheep and goats, we may

<sup>4</sup> Cf., for example, the use of teeth to establish kill-off patterns of ovicaprids by Payne 1973, which in turn provides information on the purposes for which animals were bred.

<sup>5</sup> Zeder 1991, with the important review discussion of van Driel 1993. For earlier (New Kingdom) Egypt, the work of Barry Kemp at Amarna is exemplary, cf. Thompson 2002: 122 n. 2.

<sup>6</sup> In addition to the new texts in *P.Count*, see *P.Ash.dem.* 81 (third century BC), from the Theban region, to be published by Cary Martin and Willy Clarysse; *P.Rifeh inv.* E7 + E6 (147 or 136 BC), Lykopolis, to be published by W. J. Tait and Willy Clarysse; *P.Cairo dem.* II 31073 (241/240 BC), South Fayum, transcribed by Andrew Monson. I am grateful to all of these scholars for allowing me to use these texts.

pause to consider the link that existed between the army and the land. For land allotments were made not just for the maintenance of cavalrymen and their families but also for their horses. The far larger allotments (of 100 or 80 arouras) that were granted to members of the cavalry may be explained in part by the cavalry's need to support their own mounts. Mercenaries received their horses from the state,<sup>7</sup> but those settled on the land would have been expected to provide for their horses themselves. In the third century BC 100 arouras (27.5 hectares) was the regular grant for cavalrymen; grants of 80 arouras provided 20 hectares. Some cavalry settlers kept their own stables with a resident groom;<sup>8</sup> others may have boarded their horses elsewhere. Wider equestrian interests sometimes accompanied the need to care for a cavalry mount.<sup>9</sup> For their horses all such settlers needed fodder as well as grain, and this in part explains the larger grants of land that were made to the cavalry.<sup>10</sup> If the figure of nine kilograms as a daily ration for a cavalry mount is adopted (3,285 kg. p.a.),<sup>11</sup> of which half (1,642 kg.) comes in cereal and half in other foodstuffs (hay, chaff or straw, and green crops with a high nutrient value like vetch or lupin), then some ten arouras of cereal and—say—five sown with a fodder crop would be what a cleruch needed to feed his horse.<sup>12</sup>

Despite the need to support their mounts, the cavalry settlers of Ptolemaic Egypt still had land to exploit, and the use of that land might be varied. The main crop was normally a cereal crop, together with a range of other agricultural produce.<sup>13</sup> In addition the record of stockholding often survives, of animals to plough the fields and also of the sheep and goats which form the subject of enquiry here. This was stockholding within the context of mixed farming, what has elsewhere been termed a dual economy of the plough and pastoralism.<sup>14</sup> Both the agricultural exploitation of their land and the rearing of stock were important to these settlers, who came to form the elite of the

<sup>7</sup> *P.Petrie* II 35a iii.1 (242 BC); cf. *P.Petrie* III 54, with improved readings for both texts in *BL*. For royal horses stabled at Krokodilon polis in the second century, see the fodder receipts of *P.Tebt.* III 843.13, 18 (152 BC).

<sup>8</sup> *P.Count* 26.30; 27.35 (254–231 BC).

<sup>9</sup> See *P.Cairo Zen.* II 59225.2–8 (253 BC), for the black breeding stallion of Nikandros and Myricon, sons of the Pisidian cavalry cleruch Leptines who is recorded in *P.Lille* I 27 = *W.Chrest.* 199 (254–231 BC).

<sup>10</sup> Infantrymen, for instance, might receive just 25 arouras (6.9 hectares).

<sup>11</sup> Engels 1978: 126–7, 20 lb. per day. Hyland 1990: 41–5 draws attention to the higher nutrient value of emmer compared to wheat and of green crops compared to grass or hay. A good supply of water is also essential.

<sup>12</sup> This calculation assumes an average 10 artaba-yield to an aroura sown with grain, one-third of which was levied in tax and other charges on cleruchic land, leaving 6.66 disposable artabas (170 kg.) per aroura. For 25.545 kg. to an artaba, see Duncan-Jones 1976: 40; for 0.25 ha. (C.1 aroura) sown with lucerne, a particularly nutritious crop, as sufficient for three horses, Hyland 1970: 41.

<sup>13</sup> See Thompson 1999.

<sup>14</sup> Sherratt 1997: 189; cf. Halstead 1996 for different livestock regimes. Nixon and Price 2001: 406 draw the distinction between Athens, where market-oriented husbandry was found

areas where they lived, above all the Fayum and Middle Egypt. They had larger families than did their Egyptian neighbours, larger plots of land than the average, and in many cases they also had lots of sheep and some goats. We might start with Asklepiades, whose household declaration survives dated 23 January 240 BC:<sup>15</sup>

Year 7, Choiach 4. Asklepiades, wife Patrophila, son Apollophanes aged 15, Apollodoros aged 13, Artemidoros aged 10, Ptolemaios aged 5, nurse Kosmia, hired agricultural workers (*geōrgoi misthōi*) Chazaros, Rhagesobaal, Ieab, Krateros, Sitalkes, Natanbaal, shepherd (*poimên*) Potamon, cowherd (*boukolos*) Horos, total 15 persons (*sōmata*).

A declaration follows of his grains and pulses and their whereabouts.

Although Asklepiades is not explicitly described as a cleruch, it is probably safe to assume that he is one, since all other household declarations from this date are from among this class. His household is an interesting one in various ways—four sons, but no daughters,<sup>16</sup> the nurse still living with the family even though the youngest child is now aged 5, six agricultural workers with one Thracian and five Semitic names who form part of the household, as did the cowherd and shepherd. A household group of fifteen, of whom probably three were under tax-age, is on the larger side for the period but is certainly not unparalleled. It is notable that the cowherd Horos and the shepherd Potamon are both recorded as resident in their master's home, since the picture of stockholding in the Zenon archive, in contrast, is regularly that of independent shepherds, who rented the sheep from their owners under a variety of different arrangements.<sup>17</sup> Here, however, the shepherd is part of the household, and this is the case elsewhere among the cleruchic community of the time;<sup>18</sup> Potamon's Greek name could, but need not necessarily, denote a slave.

So much for the shepherds; what of the sheep that they herded and the size of their flocks? Evidence for cleruchic holdings of sheep, as indeed for further live-in shepherds, comes from other administrative documents, and especially the tax-registers drawn up for the salt-tax together with the one-obol tax on small animals recorded at the same time. *P.Count* 2.278–440, for instance, from 229 BC lists the cleruchs and their livestock for one particular tax-district in the Themistos *meris* of the Arsinoite nome. In this one district there were some 2,500 adult civilians, 99 cavalrymen and 18 cavalry veterans. For the two

alongside arable culture on the estates of the wealthy, and the pastoralism of Crete, where transhumance and cheese-making pertained.

<sup>15</sup> *W.Chrest.* 198 = *C.Pap.Jud.* I 36.

<sup>16</sup> Since women were taxed in Egypt, any surviving girls would have been listed; on such a shortage of girls, see Clarysse and Thompson 2.311–12.

<sup>17</sup> See Rostovtzeff 1922: 113–16; Préaux 1947: 31–4; Orrieux 1985: 260–3; Clarysse and Thompson 2.273.

<sup>18</sup> Further live-in herdsman are recorded in *P.Count* 2.391 and 421 (229 BC).

groups of military settlers, the numbers for small animals survive. Livestock is found in thirteen out of the fifteen households of the cavalry cleruchs, with both sheep and goats in one of the two veteran households. For cavalry settlers in the district overall, the average holding for sheep (together with lambs) was 162 and 2 for goats (with kids). However, if only those households with sheep or goats are counted then the average (or mean) is raised to 212 sheep and 5 goats per household. The median holding for sheep is 162 and 4 for goats. The largest holding is that of Autoboulos son of Autonoos, who is recorded with 540 sheep, 170 lambs, 4 goats, 4 kids, and 13 pigs. His household of nine taxpaying adults included one male slave, a nurse and two female slaves, but no herdsman.<sup>19</sup> So, for shepherding this size of flock Autoboulos clearly went beyond the household unit. Indeed we probably meet this individual again some eight years later, living in Psinachis and still involved with sheep. A very fragmentary complaint names Autoboulos and his shepherd Semtheus together with sheep and pastureland.<sup>20</sup>

Before leaving the Arsinoite nome, we should briefly consider the stock-holding of others besides the cleruchs. From the same district as Autoboulos and his colleagues, there survives a record of the pasturage tax (demotic *qtm*; Greek *ktamion* or *ennomion*) for four individuals described as the 'free persons' of their village; these, most probably, were non-military stockholders, and it is striking that all four, with their holdings of sheep and goats, again have Greek or Jewish names.<sup>21</sup> Both Jews and Arabs are often found involved with sheep. Again we are in an immigrant context. According to the Zenon archive huge flocks were centred on Apollonios' gift-estate around Philadelphiea in the Arsinoite nome and in villages of the Memphite nome. Flocks here belonged to both Apollonios and Zenon himself and they were managed in various ways, directly and indirectly on lease. Zenon, for instance, controlled some 1,836 sheep and 122 goats, but the *dioikētēs* Apollonios had even more.<sup>22</sup> This was big-scale production, and these operations have been studied elsewhere.<sup>23</sup> They played a significant part in the economic activities of the estate, along with the pigs, the half-wild troops of buffalo, the oxen used for ploughing, and the heifers reared for the market. And on Apollonios' estate flocks of goats only are also found, goats which would browse the desert edge

<sup>19</sup> *P.Count* 2.331–341 (229 BC).

<sup>20</sup> *P.Enteuxeis* 91 (26 Feb. 221 BC). For further sheep at Psinachis, see *SB* XX 14577.4 (c.240 BC).

<sup>21</sup> *P.Count* 2.243–9 (229 BC), Kallistratos son of Kephalon, Ammonia daughter of *Qrtmss*, Isidoros son of Damis, Protogenes son of Ioudas.

<sup>22</sup> *P.Cairo Zen.* III 59394.4–10, Apollonios with 6,371 sheep and 206 goats, of which Zenon is responsible for 1,836 sheep and 122 goats. Zenon and Hermias the goatherd (*aipolos*): *P.Cairo Zen.* III 59328 (248 BC); cf. *P.Cairo Zen.* III 59429 + *P.L.Bat.* XX 35; *P.Wisc.* II 78 (248 BC); *P.Mich.Zen.* 67.

<sup>23</sup> Thompson 1988: 43–5 (sheep and goats), 51–7 (wool and woollen cloth), 52 (new breeds of sheep).

and consume the prickly plants that the sheep left alone.<sup>24</sup> Estates gifted by the king were used to promote royal interests, which included the development of animal husbandry.<sup>25</sup> Military settlers were following the royal suit, if on a somewhat smaller scale.

It is never wise, however, to generalize too widely from the pattern of one particular area, and especially from the Fayum, to the rest of Egypt. Animal husbandry is in part dependent on the landscape of the country and the availability of fodder. The picture of the Delta with its cowherds remains, in the main, uncharted—the damper climate has not favoured the survival there of papyri—but moving up the valley to Upper Egypt, we find a degree of variation. From the Thebaid (perhaps from Diospolis Mikra), again in the second half of the third century BC, a demotic text now in the Ashmolean Museum provides details of the livestock holding of sheep and goats, for groups of Greek military settlers divided into cavalry and infantry.<sup>26</sup> The holdings of livestock are larger for cavalymen than they are for infantrymen, as no doubt were the plots of land which provided the basic fodder for their animals. Both groups are distinguished by their Greek names in an otherwise Egyptian community. These are the men with livestock in the area: a total of 752 sheep with 54 goats are recorded for eight cavalymen, giving an average holding of 94 sheep with 5.5 goats. For the 23 infantrymen from the first detachment who were settled in the area, 1,004 sheep with 90 goats are recorded, giving an average of 44 sheep with 4 goats. Overall this gives an average holding of 57 sheep with 4 goats, which is somewhat less than found in *P.Count* 2 (229 BC) from the Arsinoite nome to the north, with its predominance of cavalry cleruchs.<sup>27</sup> Where the Nile valley was narrower in the south and the desert pressed in on either side, the smaller land grants made to infantrymen were probably easier to find than the larger plots used for settling the cavalry. Here too flocks were smaller than in the north. The same difference was still to be found in the early nineteenth century when the Fayum was the centre of wool production, with the wool washed on the sheep before shearing (twice a year compared to just once in the south) and where jackets of palm leaves were used to protect the sheep that were newly-sheared.<sup>28</sup> Nevertheless, despite some difference in scale between the military groups, this text from the Theban area represents the same general pattern as found in the

<sup>24</sup> See Saber 1994: 642.

<sup>25</sup> As seen in the display of 130 Ethiopian, 300 Arabian, and 20 Euboean sheep at the Ptolemaia in 278 BC (Ath. 5.201b).

<sup>26</sup> *P.Ash.dem.* 81 (third century BC).

<sup>27</sup> Cf. a later Arsinoite register from Samareia, *P.Tebt.* III 882 (155 or 144 BC), recording sheep + lambs and goats + kids + billy-goats for one 80-aroura and one 30-aroura cleruch followed by *stratiōtai* (infantrymen?). The *stratiōtai* again have somewhat smaller flocks.

<sup>28</sup> Girard 1813: 555–6. Leatherjackets for sheep are recorded in the Zenon archive, cf. *Pap. Lugd.-Bat.* XXI p. 736, s.v. *hypodipphtheros*, with Thompson 1988: 52.

Arsinoite nome. Many military settlers, it is clear, had sizeable flocks of sheep, with just a few goats used in the place of sheepdogs to guide the sheep that might stray.<sup>29</sup>

Egyptian stockholding, in contrast, was practised on a far smaller scale than among the immigrant settlers. A second-century record of sheep and goats from Lykopolis, for instance, in Middle Egypt provides some relevant details.<sup>30</sup> The median flock of sheep recorded for what is primarily an Egyptian group of stockholders numbered just 20, with 32 as the average or mean, which is noticeably smaller than even the 44 mean for the flocks of the infantrymen settled in the region of Thebes. Similarly, from the Arsinoite, the series of demotic declarations with Greek dockets of sheep and goats made by Egyptian stockholders in 251 BC shows a pattern of smaller Egyptian holdings.<sup>31</sup> The superior role of the immigrants is again underlined.

So how far was this degree of livestock holding new in the rural economy of the Nile valley, and how far did it simply represent a shift from one set of large owners—the temples, perhaps, or big Egyptian rural landowners—to another, the Greek military settlers? The answer is not clear. Large flocks of temple sheep are certainly recorded from the New Kingdom in the Harris papyrus.<sup>32</sup> Some 'sacred sheep' are still found in Ptolemaic texts, but on nothing like the same scale; big temple flocks would seem to be a feature of the past.<sup>33</sup> Part of the emphasis on pastoralism found among Ptolemaic military settlers received an impetus, I would suggest, from reclamation work in the Fayum and elsewhere, which resulted in new land suitable for pasture if not for cereal crops. The needs of the expanding population of Egypt, as the towns developed and grew from the third century BC onwards, seem likely to have provided a further economic incentive.

How well did such a pattern of animal husbandry fit with the landscape and ecology of Egypt? The food needs of sheep and goats are not the same. Goats, which browse as well as graze, consume far rougher material than do sheep, which need to crop the grass and graze on suitable crops.<sup>34</sup> For sheep, the green fodder crops—the lupin, vetch, and clover used for donkeys and for cattle—are ill suited for digestion.<sup>35</sup> Pasture land was needed for these flocks

<sup>29</sup> See Keenan 1989: 179–80; Halstead 1996: 24.

<sup>30</sup> *P.Rifh inv.* E7 + E6 (147 or 136 BC).

<sup>31</sup> See Clarysse and Thompson 2.206 n. 6.

<sup>32</sup> Thompson 1988: 107.

<sup>33</sup> e.g. *P.Cairo Zen.* III 59394.6, just 268 sacred sheep (untaxed) among the large numbers on Apollonios' estate; *P.Gurob* 22 (third cent. BC); *P.Tebt.* I 53.5–7 (110 BC).

<sup>34</sup> For problems over grazing or browsing land, see (e.g.) *P.Cairo Zen.* III 59362 (dry land, *chersos*); *PSI* IV 367 (250/249 BC); IV 380, goats grazing on the stubble thrown off for cattle; IV 346 (255/254 BC), both sheep and goats on lotus-land.

<sup>35</sup> In Ptolemaic land surveys, established pasture-land (*chortonomai*) was recorded separately from fodder crops (*chlōra*), cf. *P.Tebt.* I pp. 563–4; for fodder crops in demotic, cf. *P.Count* 46, introduction (p. 439) and *P.Cairo dem.* II 31073 (241/240 BC).



when stubble was good for goats.<sup>36</sup> Goats, in Egypt, can roam far further onto the desert edge as they search for food, but in mixed flocks, with just a few goats, the needs of the many were paramount. To judge from later records, during the inundation season and while the main cereal crops were growing, the sheep and goats were fed with green or dried fodder crops, like clover or vetch, supplemented with chopped millet stalks and beans; then for the four months following the harvest, they could feed off the land, browsing or pasturing along the paths and banks of the irrigation canals, finding green stuff among the stubble and the remains of crops to eat.<sup>37</sup> And as they fed, they manured the fields. Once more we find interdependence between the settled farmers and the shepherds with their wandering sheep, though the need to find food for the animals was a constant worry for their owners and a source of potential tension in rural society.<sup>38</sup>

The products of the two animals are well known, and the economic attraction of these goes far to explain the phenomenon of large-scale animal husbandry. Kids and lambs were in demand as meat. Goats' hair was used for coarse clothing, and the skins, as in later times, served as containers transported by donkey or on the backs of men, whose trade it was to carry round the water needed by all to drink. Milk and cheese were valued products of both sheep and goats. Of sheep, wool used for clothes and carpets formed the main secondary product.<sup>39</sup> The processes are documented in the Zenon archive, and the new town of Philadelphia attracted garment-makers hoping to set up their trade with Zenon as their sponsor.<sup>40</sup> And whereas spinning took place in the villages, probably contracted out as home work for women, weaving sheds with a slave work-force are to be found in urban centres like Memphis.<sup>41</sup> It seems likely, though we cannot know for sure, that some of the larger rural slave-establishments registered for cleruchs were similarly involved in textile-production.<sup>42</sup>

Flocks (and herds) on the scale found for military settlers are certainly not bred for simple household use. These represented rather an investment for their owners in their secondary products, in the milk and especially the wool which they produced.<sup>43</sup> Girard, writing in the aftermath of Napoleon's

<sup>36</sup> For fodder crops and pasture (of differing quality) in a South Fayum village, see *P.Cairo dem.* II 31073 (241/240 BC): pasture 10%, clover 1.6%, vetch (*arakos*) 1.3%; Thompson 1999: 129, for a large area of the Arsinoite: grass 2.5%, vetch 5.6%; 130, for Kerkeosiris: vetch (*arakos*) 10%, green fodder crops 4%, pasture 3%.

<sup>37</sup> Girard 1813: 555.

<sup>38</sup> *P.Heid.* IX 422 (158 BC), a crown farmer complains about the sheep of the *archiphylakitēs* Seleukos grazing where they should not be.

<sup>39</sup> For wool-working, see Préaux 1947: 38; Thompson 1988: 51–9.

<sup>40</sup> *PSI* IV 351 (265/5 BC).

<sup>41</sup> Thompson 1988: 53–9.

<sup>42</sup> See further Clarysse and Thompson 2.283 n. 198.

<sup>43</sup> On the concept of 'secondary products', see Cherry 1988: 24.

invasion, reported that in the early nineteenth century some 800 sheep were sufficient to meet the needs of a village of 2,000 feddans of agricultural land.<sup>44</sup> 2,000 feddans represent some 840 hectares, which is on the small size for a Ptolemaic village; Kerkeosiris in the South Fayum, for instance, contained some 1,105 hectares (4,014 arouras) of cultivable land in the late second century BC. On the assumption that needs are not likely to have changed much over time, we may note that a village's needs could be met by the sheep of just a couple of the larger stockholding cleruchs. Simple subsistence was clearly not the aim of such immigrant owners. Stockholding in addition to agriculture will have spread the risk and brought added wealth for the settlers. In the size of their households, their plots of agricultural land and livestock too, the cleruchs of Ptolemaic Egypt displayed their social and economic superiority within the mixed society of Hellenistic Egypt.

The link of pastoral activities with the growing monetarisation of Egypt is also an aspect to consider. For taxes on livestock were levied not in kind but in cash. There was the pasture-tax, the *ennomion* (see above), the guard-tax or *phylakitikon* which was levied differentially on different animals, and rents to be collected by those who rented their livestock out.<sup>45</sup> The one-obol-a-head tax for all small animals listed with the cleruchs in *P.Count 2* may represent a salt-tax charged on animals. Pastureland too was subject to a monetary rent, and in this it stood in contrast to the major crops of the country, on which rents and taxes came regularly in wheat or wheat equivalent.<sup>46</sup> For fodder crops also a market in cash pertained, which may have helped to integrate the different sectors of the countryside.<sup>47</sup> Farmers with any surplus fodder to sell would find a ready market among the cleruchs.

The final contention of this study is that the economic significance of animal husbandry in Ptolemaic Egypt is closely linked to the growing urbanization of the period. Such growth is easier to document than is the link between the two. Villages turning into towns and towns into larger towns (the later Roman *metropoleis*) are certainly a feature of Hellenistic Egypt. These larger urban communities provided a market for the products of the settlers' livestock, as is most clearly found for Alexandria. Here, as in Memphis and the other towns of Egypt, we can document the demand for meat and dairy products, particularly cheese. Here, too, were located many of the fulling

<sup>44</sup> Girard 1813: 556.

<sup>45</sup> *P.Cairo Zen.* III 59394, collection of different rates on different animals (no charge on sacred sheep; cavalrymen pay 3.5 not 4 obols on sheep); the *phylakitikon* was probably involved, cf. Skeat on *P.Lond.* VII 2010, introduction.

<sup>46</sup> For fodder crops liable to cash levies, see *P.Cairo dem.* II 31073 cols. iii-iv (241/240 BC), cash payments as part of an 'account of the grass-fodder fields of the harvest of year 8'; cf. *P.Tebt.* I 60.41 (118 BC), *nomai pros chalkon dioikoumenai*; 61a.154 (118/117 BC); *P.Bürgsch.* 1-6, cf. 7-8, for cash rents in land leases for growing grass and *arakos*.

<sup>47</sup> Bingen 1987.

and textile establishments, the looms and the weaving sheds.<sup>48</sup> Animal husbandry and urbanization were connected in terms of supply and demand, though the detail of how these connections worked is not always easy to discern. All we know for certain is that the two went hand in hand. Further work is needed here and, in some future study, the wider Hellenistic world needs to be brought into the picture, for animal husbandry in its different forms was surely an important economic activity in other states as well.<sup>49</sup>

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<sup>48</sup> Cf. *P.Rev.* 90.4; 94.2, 5; 102.3 (259 BC), for monetary charges and royal control of looms.

<sup>49</sup> Pergamum, with its royal flocks, would form an interesting comparison.

- (1999), 'New and Old in the Ptolemaic Fayyum', in A. K. Bowman and E. Rogan (eds.) (1999), *Agriculture in Egypt from Pharaonic to Modern Times* (PBA 96). Oxford: 123–38.
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# The 'Silverization' of the Economy of the Achaemenid and Seleukid Empires and Early Modern China

R.J. VAN DER SPEK

## INTRODUCTION

In recent years interest in the economic history of Hellenistic Babylonia has been growing, and rightly so. According to Herodotos, Babylonia was the second richest province (after India) of the preceding Persian Empire. It was the core of the empire of Alexander and the power base of Seleukos I. It was a highly urbanized region. Another attractive feature is the fact that a kind of documentation unique to the ancient world is to be found there, that is the rich cuneiform evidence of the first millennium. Several tens of thousands of cuneiform administrative documents are available from the Neo-Babylonian to the Parthian period. These documents shed light on the households of temples, the palace, and private entrepreneurs. They have been studied among others by Matt Stolper and Michael Jursa, and many editions of archives have come to light in recent years.<sup>1</sup>

I profited much from the help of Dennis O. Flynn, who carefully read my manuscript, gave useful advice and corrected my 'Dunglish'. He is not responsible for the views expressed in this paper.

<sup>1</sup> During recent decades a range of studies appeared concerning the economic history of first-millennium Babylonia. The documentation consists of a variety of archives generated by temples and private entrepreneurs. Examples of recent editions and studies of archives include: Abraham 2004, Baker 2004, Bongenaar 1997, Da Riva 2002, Doty 1977, Gehlken 1990 and 1996, Janković 2004 and forthcoming, Joannès 1982 and 1989, Jursa 1995 and 1999, MacGinnis 1995, Stolper 1985 and 1993, Van der Spek 1998, Waerzeggers 2000, Wunsch 1993 and 2000, Wallenfels 1998. For discussion of the archives, see Jursa 2005a. Michael Jursa (Vienna) currently leads a research programme on the first-millennium economy of which the first results are now appearing: Baker and Jursa 2005, Jursa 2010, and several articles and books by Jursa, Baker, Waerzeggers, and Janković. For an extensive bibliography see Baker and Jursa 2005: 393–416; Jursa 2010: 817–49.

A second important source is the data set of prices preserved in the Astronomical Diaries. These diaries, consisting of daily observations of the night sky, were written by Babylonian scholars and served astronomical and astrological research. These diaries also contain monthly records of the prices of raw foodstuffs and wool, probably for the benefit of astrological research. The diaries also provide information on local Babylonian history and sometimes on international politics. This is important since this information can be used to interpret fluctuations of prices. Recently a new corpus of tablets containing prices only has been published by Slotsky and Wallenfels (2009). The prices have been subjected to statistical research by Alice Slotsky (1997) and Peter Temin (2002), but neither scholar took great account of exogenous shocks that influenced prices, such as: warfare, plagues, locusts, royal measures on taxation and land distribution, the presence of the king and his court, the presence of armies, riots, the weather, etc.<sup>2</sup> As I have recently published an overview of the economy of the Hellenistic Near East (Van der Spek 2007), I shall in this chapter shed light on a specific aspect of the Babylonian economy of the Hellenistic period, namely the role of silver in taxation and economic development in comparative perspective.

## THE STATE, ROYAL INCOME AND INTERNATIONAL TRADE.

In his pioneering work on the economy of the Seleukid Empire G.G. Aperghis provides an in-depth study of royal revenues and the burden of taxation (Aperghis). He concludes that the overall taxation in Babylonia was of the order of 40 per cent of agricultural production (pp. 257–8). In the following paragraph, I discuss the consequences of price fluctuation for the royal income. Herodotos tells us (3.92) that under the Persian king Darius I (522–486 BC) Babylonia (+ Assyria) paid annually 1,000 Babylonian talents = 30 tons (30,000 kg.) of silver from a total royal income of 7,600<sup>3</sup> Babylonian talents

<sup>2</sup> The prices have been collected by Alice Slotsky (1997) and Peter Vargyas (2001). For a review of these editions, see Van der Spek and Mandemakers (2003). I have published a new collection on the website of the International Institute for Social History in Amsterdam (Van der Spek 2005). Currently a research programme conducted by the present author concerning prices and market efficiency of food and wool from late Achaemenid to early Parthian times is being carried out in Amsterdam (VU University), with forthcoming studies by J.A.M. Huijs, B. van Leeuwen, P. Földvári and R. Pirngruber.

<sup>3</sup> Or 7,740 talents, if one includes the 140 talents from the 4th satrapy (Cilicia), which were used for the Cilician cavalry. It is expressly stated that this amount did not go to Darius, that is to the treasury in Persepolis. But 7,600 is apparently the total assumed by Herodotos. Cf. How and Wells 1928: 287.

(228 tons) of silver (= 9,880 Euboean talents according to Herodotos 3.95)<sup>4</sup> from the entire empire and 360 Euboean talents of gold from India = 4680 talents of silver.<sup>5</sup> Herodotos arrives at 14,560 Euboean talents. This figure sounds reasonable if it is compared with the annual income of Antigonos Monophthalmos of 11,000 talents (Diodoros 19.56.5) from a slightly smaller empire (cf. Aperghis 248). When Alexander the Great seized the royal treasures in 330 BC he acquired 180,000 Euboean talents (c. 45,000 tons), which amount apparently included gold valued as silver (Diod. 17.71.1). If we leave aside the Indian gold, it must have taken 18 years to collect this. It has been maintained that the Persian policy was directed at hoarding the tribute it received (Olmstead 1948: 297–9), which would have been detrimental to the imperial economy. It is sobering to note that in 190 years the Persian kings received 1,877,200 talents of silver, of which 180,000 talents were hoarded = 11.8 per cent. This percentage is lower if one includes gold income from India: 14,560 talents in 190 years = 2,766,400 talents, of which 180,000 talents becomes 6.5 per cent (cf. Tuplin 1987: 138 n. 112). I doubt the regularity of the Indian income, but on the other hand income may have increased after Darius and after Herodotos' lifetime in view of increasing monetization of the Achaemenid economy.

In Book 1.192 (the *Babylonios logos*) Herodotos provides another example of Babylonia's wealth. He states that apart from Babylonia's normal taxation (apparently the 1,000 talents to be paid to the king), it had to pay for support of the royal household and the army the amount of one *artabe* of silver per day. Aperghis (249–50) argues that this amount equates to 5,000–6,000 talents per year. He assumes this is total revenue from Babylonia and, he argues, it fits the rule of c. 1 talent per 1,000 inhabitants. This amount includes all income, and the 1,000 talents refers to the silver that went to the royal treasury.

In order to conceptualize the purchasing power of the Babylonian tax burden, it is useful to calculate 1,000 talents of silver, when converted to barley. Barley prices were high in the days of Darius I (Vargyas 2001: 64). For one shekel of silver (8.33 g) one could buy between 18 and 33 litres of grain, on average c. 25 litres, whereas the Mesopotamian norm was one *kor* (= 180 litres) for a shekel, exchange values indeed attested in the reigns of Nebuchadnezzar (605–562) and Seleukos I (311–281). At this price level (25 litres for a shekel) 1,000 talents (= 3.6 million shekels) of silver is equivalent to 90 million litres of barley. Babylonian yield ratios per hectare have been established at nearly 2000 litres or 1,240 kg per hectare.<sup>6</sup> Modern

<sup>4</sup> If Herodotos is correct in stating that 7,600 Babylonian talents equals 9,880 Euboean talents, and if the Babylonian talent weighed 30 kg., the Euboean talent must weigh 23.08 kg (cf. *OCD*<sup>3</sup> 1621: 25.86 kg.). Therefore one Babylonian talent = 1.3 Euboean talent.

<sup>5</sup> Herodotos maintains that the value of gold is thirteen times the value of silver, hence 360 Euboean talents of gold equals 4680 talents of silver (Herodotos 3.95). The value of the Indian contribution would be 3,600 Babylonian talents (108,000 kg of silver).

<sup>6</sup> Stolper 1985: 136, table 5.

data (1950s and 1960s) for the Diyala region vary between 1,000 and 1,400 kg per hectare.<sup>7</sup> These modern figures seem comparatively low, but it should be noted that in modern times the seeder plough is no longer used and one might assume that Babylonian large estates worked more efficiently than modern smallholders. This means that, *if* the taxes were to have been paid in barley, 45,000 hectares would have been needed to produce this. In 1960, 2.8 million hectares of modern Iraq were irrigated, so 45,000 hectares = 1.6 per cent of this. 5000 talents' taxation would require 225,000 hectares or 8 per cent of the irrigated area, still a not excessive burden. When grain prices were more modest, as in the early years of the Seleukid period, it was necessary to sell more grain on the market in order to get the same amount of silver. At a price of 180 litres for a shekel, a taxation of 1000 talents (= 3.6 million shekels of silver) equals 648 million litres of barley, which requires 324,000 ha to produce, i.e. 11.6 per cent of the irrigated area, still not an excessive burden. Payment of 5,000 talents, however, would require nearly 60 per cent of the irrigated area, which would be extremely high, but Aperghis has estimated that the average exchange value of a shekel of silver was 120 litres of barley. This means that in the Seleukid period, 40 per cent of the irrigated area was needed for payment of taxes. This seemingly fits in with Aperghis' conclusion that the king's income from agriculture must have been around 40 per cent of the value of total agricultural production (Aperghis 258).

I realize, of course, that these figures are theoretical. We do not know whether Herodotos' figures are correct, and it is even less certain that these figures were applicable to the early Hellenistic period. In addition, taxes were not collected on the produce of barley alone (dates constituted another important foodstuff, but prices per litre were not much different from those of barley) and the entire irrigated area was not sown with barley. There were other agrarian products and there was trade. From different sources we know that there was a salt tax, taxes on slave sales and on sales of landed estates (Rostovtzeff 1932; *SEHWW* 469–72; Doty 1977). On the other hand, in an agrarian society the bulk of taxation must have been levied on agrarian products. In sum, royal income from agricultural production must on average have been lower than 40 per cent. It is difficult to say how much lower, but comparison with Egypt may shed light on the question. Richard Duncan-Jones calculated gross revenue taken by tax of grain at 25–28 per cent, which is again higher than the land-based provincial tax-rates as defined by Hyginus and Orosius: 20 per cent of the Egyptian harvest was paid as tax. In other provinces it was only 14 per cent. Fifty-four per cent of tax-revenue in Egypt under the Principate consisted of grain revenue (Duncan-Jones 1994: 53, table 4.6). Duncan-Jones sets total Egyptian revenue from all sources at 41 per cent

<sup>7</sup> Adams 1965: 13–20, esp. 17.



of grain production, which conforms to the 40 per cent calculated above for Hellenistic Babylonia (Duncan-Jones 1994: 55).

It is intriguing to think about consequences of high and low grain prices for taxation. On the basis of these simple calculations, one might imagine that high prices were favourable for the farmer: it was easier for him to get the necessary silver. But high and low prices are caused by climatic, economic, and political developments. High prices may be caused by two factors: (1) a profusion of silver in circulation; or (2) a shortage of grain production. If (1) is correct, Olmstead's tenet about consequences of the alleged Achaemenid policy of over-taxation and hoarding is certainly incorrect. It is more likely, however, that prices rose due to a 'silverization' of the economy; that is, the increasing role of silver as means of exchange (see below). Whether there is enough evidence for shortage in grain production, I do not know. Jursa's economic history project may suggest some answers (cf. n. 2). One thing we learn from the tablets is that lack of manpower was one of the main problems for the temples. This manpower shortage might have led to a decrease in grain production (Jursa 2005*b*: 173–6).

High grain prices between 330 BC and 300 are easier to explain. There was a time of continuous warfare right after the death of Alexander: the wars of Eumenes and Antigonos; the wars of Seleukos and Antigonos. After the battle of Ipsos (301 BC), Babylonia experienced a more peaceful time and this may explain lower grain prices. In 295, 292, and 285 BC the traditional 'ideal' price of one kor (= 180 litres) of barley for one shekel is recorded. Yet several other factors might have led to higher prices in this period as well. (1) The enormous amount of silver brought into circulation by Alexander the Great, which was coined in the period 330–294 (de Callatay 1989); (2) the increase in population thanks to the founding of new cities, esp. Seleukeia on the Tigris. Let us propose some tentative explanations. Aperghis (81) has argued that most of the coined money left Babylonia soon. Most of it was taken by the mercenaries who went home to the west. The second factor may be explained away by assuming that the population grew especially in the Tigris region and not so much in the Euphrates region, from where we have evidence concerning prices. I have calculated that the Diyala region alone could easily feed the city of Seleukeia (Van der Spek 2008): no imports were necessary. Babylon may not have experienced growth in population, so it was easier to feed this city as well. Hellenistic settlement policy and renewed irrigation projects may simply have been successful.

The main problem of the taxation system was probably not its amount, but the fact that it had to be paid in silver. Mesopotamia contained no silver mines; hence all silver had to be imported. A telling example of dependence on imports is indicated in the Neo-Assyrian Empire. In this period copper, bronze and silver were used as money, but before 712 BC copper was preponderant. In 712 Sargon II conquered Carchemish. After that campaign, silver

replaced copper as the main currency and silver is measured in the mina of Carchemish (Postgate 1979: 18, Müller 1997: 120; Radner 1999: 129). Sargon II plundered so much booty in that campaign that he boasted that from that time on the exchange value (*mahīru*) of silver was to equal that of bronze (*Annals from Khorsabad* 232–4 = Fuchs 1994: 130 ff.). This incident is but one example of the way ancient empires secured parts of their income: by conquest, booty and taxation. This expedient was especially open for successful empires, and core regions profited from it. Babylonia was just such a core region in the Neo-Babylonian period, but probably less so in the Achaemenid period.

Another method to acquire silver was through trade. The classic example of this procedure is given by Assyrian merchants in nineteenth-century BC Kanesh in south-east Anatolia. The traders moved Babylonian textiles and tin to Kanesh and brought back silver to the city of Assur (Veenhof 1972; Dercksen 1996; Kuhrt 1998). This implies that as trade routes failed and conquests stopped, availability of silver in Assyria and Babylonia was threatened. The Seleukid Empire did not have a clear cut core: Seleukeia on the Tigris was a centre of empire, but Antioch in Syria and Sardes in Asia Minor were also centres. It is difficult to tell the portion of profits of empire that entered Seleukeia.

If silver did not come to Babylonia through booty and taxation, silver must have been imported through trade. If silver was imported by trade, something else must have been exported in exchange for silver. An important source of wealth for Babylonia was agricultural production, but agricultural exports were difficult. Export to Persepolis over land also seems difficult and there is no evidence that this happened. Some cuneiform documents seem to suggest that Babylonian businessmen traded in Susa, but closer inspection of texts reveals that the Babylonians in question went to Susa when Persian authorities orchestrated expeditions for presentation of tribute (Waerzeggers 2010).

Export to Syria and Phoenicia was difficult as well. Ships had to be pulled against the current of the Euphrates up to Thapsacus, and then via an overland route to Syria, a method which was probably too difficult for bulk goods. Jursa (2004: 130–1) assumes that 'Fernhandel' was not an important part of the business of the Babylonian entrepreneurial families. In addition, texts dealing with overland trade indicate a sizable number of traders who bore West Semitic names. The trade route the other way around, from Phoenicia into Babylonia, is better documented (Herodotos 1.194; Diodoros 14.81.4; Arrian, *Anab.* 7.20.4; Oppenheim 1967; Briant 2002: 377–83). Transports entirely over land were difficult (though possible) for light luxury goods, but practically impossible for bulk goods like grain. As Babylonian textiles were famous in early times, and as we know that the Eanna temple specialized in the production of wool in the neo-Babylonian period (Jursa

2005b: 180–2; cf. K. Kleber *ap.* Jursa 2010: 595–616), it is safe to assume that textiles were still exported in the Achaemenid and Hellenistic periods, although hard evidence is lacking.

Private entrepreneurs in Babylonia made it their business to take over obligations of fief holders to pay their taxes in silver. Similar problems occurred in Judah in the Achaemenid period (see also Aperghis in this volume). The main problem of taxpayers in Judah was not that they could not produce food, but that they had to find a way to obtain silver. Hence they mortgaged their lands to obtain the silver, as is reported in the book of Nehemiah: ‘We have borrowed money for the king’s tribute, and that upon our lands and vineyards’, with the consequence that ‘other men have our lands and vineyards.’ (Nehemiah 5: 4–5). The Murashûs obtained agricultural lands in the same way (Stolper 1985: 27–8).

Yet the taxation system must have triggered trade. Farmers had to sell products on the market in order to obtain silver and through the mediation of entrepreneurs; silver stocks may have increased (Stolper 1985: 143–51). This implies that something was exported to other regions in order to obtain the silver. This *might* be linked to the explanation that prices rose in the Achaemenid period: an inflationary effect. Whether rising prices involved hardship for Babylonians is difficult to say, as we do not know the extent of increase of silver usage in day to day transactions (and hence in the purses of individual Babylonians). An indication could be that rations (or better ‘wages in kind’) per person were reduced. I do not know whether this was the case (but cf. Jursa 2005b on increase of rations in silver; Jursa 2010: 678).

Did the coming of Alexander the Great change much in Babylonia in this respect? One point often stressed is Alexander’s acquisition of the Persian treasury, amounting to 180,000 Euboean talents of silver (or 4,680 tons of silver at an Euboean talent reckoned as 26 kg, see De Callataÿ 1989). Including later acquisition it has been estimated that 200,000 talents of silver were coined in the period 330–294 BC (Bresson 2005: 59), that is 5,405 talents per year, or in kilograms: 5,200 tons of silver = 140.5 tons per year.

## THE ‘SILVERIZATION’ OF THE ECONOMY OF EARLY MODERN HISTORY

It is instructive to introduce here the price theory of D.O. Flynn and A. Giráldez (1997, 2002a; Flynn et al. 2003; Flynn 2009), who have studied the flows of silver in early modern history from Spanish America via Europe (and the Pacific Ocean) to China; a second notable exporter of silver to China

was Japan during the Tokugawa Shogunate of the late sixteenth and early seventeenth centuries (Flynn 1991). An interesting aspect is that they treat silver as both 'money' and as a commodity (sometimes in the form of bullion) with a market value. This is especially relevant for the economies of the ancient world, where silver money was often treated as bullion. Though coinage became the dominant means of payment after Alexander the Great, Babylonians continued to weigh the coins and express values in terms of silver weights (shekels). Flynn and Giráldez observed that, assuming an exchange value for a barrel of wine at one peso, an increase in price to two pesos per barrel of wine (assuming no debasement) could occur because (1) the value of the silver fell in half, or (2) because the value of wine doubled, or (3) due to some combination of the two influences (Flynn and Giráldez 2002a: 12). The same reasoning may be applied to the extreme low price of grain in Babylonia 188 BC,<sup>8</sup> when a heavy war indemnity to the Romans of 15,000 talents (400 tons of silver) was imposed on Antiochus III, which may have pushed up the purchasing power of silver, in addition to the effects due to the costs of the war itself (cf. Van der Spek 2000: 307–8). Flynn and Giráldez' research into the global flows of silver may help to elucidate flows of silver in the ancient world. A higher purchasing power of silver in Babylonia than in the west may have attracted silver.

Let us compare this with the silver imports from America into Spain during forty peak years, 1581–1620, amounting to 9,216,539 kg of silver = 230 tons of silver annually. In the same period 52,171 kg of gold were imported = 1.3 tons annually (Chaudhuri 1986: 67 = 1997: 301).<sup>9</sup> All this silver did not remain in Spain, as 150 tons of silver (excluding bullion) were exported each year from Europe to Asia (Flynn and Giráldez 1995: 204 = 1997: 262). One-third of it reached the Baltic shores thanks to the Dutch grain trade and a great deal ended up in China, where it helped to supply an emerging silver-based economy during the 'Potosí–Japan' cycle of silver (1540s–1640s).<sup>10</sup> In 1571 the 'Single-Whip tax reform' was issued by the Chinese Ming government. This law prescribed that all taxes from then on had to be paid in silver. The measure was an answer to the collapse of China's paper-money regime which existed since at least the eleventh century. This system had been tied to silver, since paper money was convertible into silver. However, due to expensive military operations, the Chinese government could not withstand the temptation of overproducing paper-money, so that the fixed exchange rate between paper money and silver could not be maintained. This led first to changes in

<sup>8</sup> In October/November 188 BC one shekel of silver (= 8.33 g) could buy 390 litres of barley = 2.56 shekel per 1,000 litres = 21.36 grammes of silver per thousand litres = 34.45 grammes of silver per tonne. Wages are unfortunately unknown, but about 1 to 4 shekels per month are attested in earlier and later periods (Van der Spek 2006: 291 f.).

<sup>9</sup> Note that the peak imports of gold were earlier: 42,620 kg of gold in the decade 1551–1560.

<sup>10</sup> Flynn and Giráldez 2002b.

the private sector: merchants began to ask for silver instead of paper money; the tax reform was only a logical next step (Flynn and Giráldez 2000). It is interesting to note that the Chinese government did not coin silver. Von Glahn (1996b: 430) observes: 'Thus the Ming monetary system evolved into a form of "parallel bimetallism" in which uncoined silver was used for long-distance commercial transactions, lump-sum salary payments, and tax remittances, and bronze coin was employed chiefly in local markets for sundry purchases and payment of daily wages.'

As a consequence, China experienced a protracted process of increasing importance of the role of silver in the economy, termed 'silverization' by Richard von Glahn (1996a and b). The effect on the global silver trade was huge. 'Conversion of more than one-quarter of the world's population (and its government) to silver customers contributed to the rise in the price of silver in China' (Flynn and Giráldez 1995: 215 = 1997: 273; 2002). This flow of treasure to the East had customarily been explained in terms of a European trade deficit with respect to Asia: Europeans bought Asian silks, spices, and porcelain and paid for them with silver. Flynn and Giráldez interpret this differently: they do not treat the flow of silver to the east as a passive drain of cash caused by non-silver imbalances; rather they see silver flows as aspects of normal, balanced trade. In other words, they treat silver as a commodity that also often doubled as money. Due to developments within China, silver was valued in China at double its value in Europe (and the rest of the world). Hence American silver was traded via Europe to China in exchange for silks, spices, porcelain, but also gold, and transported back to Europe. That furnished not evidence of trade deficit, but an example of growing world trade with silver as a crucial item that balanced trade. Silver is viewed as cause rather than effect.

The effect on the Chinese economy was two-sided. On the one hand it effected commercialization of China's domestic economy and helped China to recover from the paper-money collapse. An export industry of silk, porcelain and other products emerged and generated employment, urbanization and growth. On the other hand, in order to obtain the silver, it was necessary to export domestic resources, which involved an immense drain on China's wealth (Flynn and Giráldez 2000).

## POINTS OF COMPARISON

The approach by Flynn and Giráldez opens interesting aspects for the study of the money economy in the Hellenistic period. Several points of comparison can be made.

## **1. Darius' I taxation policy and the Single Whip Tax Reform in China starting in the 1570s**

Though silver had already been a major means of exchange and taxation, it is likely that the reign of the Persian king Darius I also witnessed a jump in taxation by means of silver,<sup>11</sup> as was the case with the sixteenth-century tax reform in China. In both cases, uncoined silver became the main currency in taxation after a period in which the importance of silver in state payments and trade had been growing. In the Persian Empire bronze coinage did not play a significant role. Transactions and salaries were indeed paid in (small fractions of) silver next to payments in kind (Jursa 2005*b*). The growing importance of silver was a gradual process over centuries in both cases. The reforms of Darius and the Chinese Single Whip reforms were both catalysts in the context of a longer process. The difference is, of course, that an elaborate system of paper-money never existed in Mesopotamia, though there were IOU's that were transferable.

## **2. Sudden introduction of a huge amount of silver on the market**

The increase of silver in the Persian economy was not sudden, but after the fall of the Persian Empire a remarkable injection of silver in the economy took place. Alexander the Great coined the Persian royal treasury and thereby released about 5,000 tons of silver in around 37 years (see above). This may be compared with the 9,000 tons between 1581 and 1620 and in total 150,000 tons of silver imported from America into Europe between 1500 and 1800 (Flynn and Giráldez 1995: 272). The effects on the economy of both periods may have been similar (more on this below).

## **3. The foundation of new commercial centres**

The foundation of Manila in 1571 was an important date in silver-trade history, since it marked the birth of global trade. It was the crucial entrepôt linking substantial, direct, and continuous trade between America and Asia for the first

<sup>11</sup> According to Michael Jursa it was in the first place labour and raw materials that the government required, but the demands were apparently convertible into silver and were paid in silver (Jursa 2010: 778–9; 783). Jursa sees no evidence for a real tax reform under Darius I, as the process of an increase in the velocity and range of silver circulation within the Babylonian economy was well under way under the Neo-Babylonian empire (Jursa 2010: 645, 658). He admits, however, that under Darius taxation may have reached a level that was potentially disruptive to the economy as a whole (Jursa 2010: 60). The Murashu Company profited from conversion of payments in kind into payments in silver, cf. Stolper 1985: 143–50. See also Briant 2002: 388–471; Bedford 2007: 322–3; 326; Jursa 2005*b*, 2006, 2010: 199.

time in history (Flynn and Giráldez 1995: 201 = 1997: 159). Developments in early modern history marked the emergence of a global market. Flynn and Giráldez conclude: “Truly global trade dates from the founding of the city of Manila in 1571, which formed the first direct and permanent trade-link between America and Asia. From this date forward, all heavily populated continents traded with each other, both directly and indirectly, in substantial volumes. Silver was the *sine qua non* of this global trade’ (Flynn and Giráldez 1995: 214 = 1997: 272). It is difficult to find a parallel in the Hellenistic period, though new cities like Seleukeia, Antioch and Alexandria come to mind, as well as the role in international commerce of the islands Rhodos and Delos. Gary Reger warned against an over-optimistic view of the Mediterranean world as a global market (Reger), against the older studies of prices by Heichelheim (1930). More research into the circulation of silver in the Mediterranean world may modify both views.

#### 4. Drain of silver from one empire or area to another and its consequences

The silver drain from the Seleukid Empire to the Roman Empire can be compared to the flow of silver from America via Europe to Asia. Is it possible to draw similar conclusions? One could argue that—thanks to war indemnities paid to the Romans after 188 BC (defeat of Antiochus III and the ensuing peace of Apamea), the growth of the Roman Empire in the Mediterranean that brought a lot of booty and taxation to the west, and finally the growth of the city of Rome, which led to a concomitant increase in Roman demand for food, clothing and silver—the Hellenistic Near East was tapped for its resources. Might this have contributed to the fall of the Hellenistic empires and their final incorporation into the Roman world (148 Macedonia, 67 Syria—remnant of the Seleukid Empire, 30 BC Ptolemaic Egypt)? Can we assume a comparable weakening of the economic power of Europe in her relation to China in the period 1550–1650? Or is it in both cases rather a sign of globalization, not only in the sphere of military and political power, but also in economic exchanges?<sup>12</sup>

<sup>12</sup> In Antiquity a real globalization (including the entire ‘globe’) did not take place, as this started only after the discovery of the Americas in the 16th century (Flynn and Giraldez (2008), who reject both the view of Frank (1998) who uses the word globalization loosely for earlier periods and the argument of O’Rourke and Williamson (2002 and 2004) who regard the global price convergence of the 1820s as the first sign of real globalization). However, one can argue for a greater ‘connectivity’ in the Ancient World in the world of the Mediterranean and the Middle East in the Hellenistic and Roman periods, represented in the concept *oikoumenē*, ‘the inhabited world.’ In non-economic spheres the connectivity also grew. Greek and Latin became means of communication from Scotland to India; Graeco-Roman architectural styles can still be admired by the modern traveller in the same geographical area. Note that commercial relations of Rome with China existed via the so-called ‘silk route.’ I realize that the measure of market integration in the ancient economy is hotly debated (cf. e.g. the skeptical approaches of Finley<sup>2</sup>; Reger; and Erdkamp 2005; for the debate: Scheidel and Von Reden 2002).

## ANALOGIES AND CONTRASTS; SOME PRELIMINARY CONCLUSIONS

To what extent are these comparisons valid, and do they contribute to the understanding of the Hellenistic economy and to the economy of Babylonia in particular?

The Single Whip reforms are said to have had a profound effect on the Chinese economy of the late Ming period (1368–1644). In the south-east, cities such as Nanking, Soochow, Sung-chiang, Ning-po, Chang-chou, and Canton boomed as perhaps never before, smaller towns in the surrounding countryside became thriving centres of specialized occupations, and the number of periodic markets in rural districts nearby rose dramatically (Flynn and Giráldez 1995: 85 = 1997: 158). However, this development had its negative aspects as well, such as over-rapid urban growth, unbridled business speculation, and severe price inflation (p. 86 = 159). The fall of the Ming dynasty (1644) is partly explained by the fact that due to numerous wars (Dutch and English harassing of Spanish ships in the 1630s, Dutch blockades of Goa and Malacca, Portuguese merchants stopped trading in Manila in 1642 when they learned of Portugal's rebellion against the Spanish crown, etc.) the import of silver was disrupted. In addition, when the value of silver gradually fell, the purchasing power for governments that collected taxes in term of fixed quantities of silver also decreased (Flynn and Giráldez 2002*b*: 405). The resurgence of the Chinese economy in the eighteenth century once again attracted massive amounts of silver to the Chinese market during the 'Mexican cycle' of silver (Flynn & Giráldez 2002*b*).

The tax reforms of Darius I did not go hand in hand with a spectacular increase of silver into Asia. Though we see an increase of the role of silver in the Achaemenid economy, the origin of this silver is 'elusive'.<sup>13</sup> The influx of silver into the Achaemenid Empire was not as vast as in China. On the other hand in Babylonia private entrepreneurs profited from reforms in Persia (Stolper 1985). The 'taxes and trade model' of Keith Hopkins (1980; 1995/6 = 2002) will have worked in Persia as well as in Rome and China. Price inflation is attested in the high prices in the Astronomical Diaries (Vargyas 2001: 62–6, 128–9). A more sudden increase in the availability of silver is attested in the early Hellenistic period. The opening up of the Persian treasures by Alexander the Great is more or less to be compared with the influx of silver from America in the early modern period. Short term price inflation occurred in Babylonia between 330 and 300, though not as a development of *longue durée*. As Aperghis (78–86) observed, the period of the Seleukid Empire was a period of volatile prices, but not a period of inflation. The explanation

<sup>13</sup> Hence the title of the study of G. van Driel (2002) *Elusive Silver*; see esp. p. 328.



probably is that (1) a great deal of the Persian silver spread over the Seleukid Empire and beyond due to military campaigns (between 300 and 141 Babylon was only exceptionally a battle scene) and trade, (2) the supply of silver dried up. There was no America which could produce silver over a long period of time. The Ptolemaic empire went over to the bronze standard at the end of the third century BC due to a lack of silver supply (Maresch 1996; Von Reden 2007). It is generally assumed that the Seleukid kings were in constant need of silver supply, although this statement is debated. F. de Callatay (1993; 2005) calculated that in the Hellenistic world c. 3,000 tons of silver and 300 tons of gold were in circulation. In total value this amounts to 6,000 tons of silver, if the silver: gold ratio is conveniently set at 1:10. Roman successes in war drained off a certain percentage of this silver. The most well known example of this is the war indemnity that was imposed on Antiochus III in 188 BC: 15,000 talents of coined silver = 390 tons of silver = 13 per cent of the silver in circulation and 6.5 per cent of the total silver value. It is questionable whether this could be repaired by trade and imports. War indemnities have another effect than export of silver through trade. The lack of inflation in Babylonia may have been caused by a growing export of silver without much return. The mint in Seleukeia produced a lot of silver currency, but most of it seems to have gone to Syria and Asia Minor (Van der Spek 2004: 317–18; 330–2). The purchasing power of silver in Babylonia was higher than in more western regions. A study of the circulation of money in the Seleukid Empire is badly needed. Europe's loss of silver was balanced by silver imports from the Americas, and also imports of gold (mainly from Africa and the Americas), porcelain and spices from China. The extent of imports from the Roman Empire into the Seleukid Empire is hard to ascertain, but was probably small.

Though there are signs of stagnation in Hellenistic Babylonia (no inflation, high purchasing power of silver, export of silver to the west, decline of Babylon, Ur, Sippar), there are also signs of economic growth: foundation of the largest city of the Seleukid Empire, that is Seleukeia, and minor cities like Antioch on the Red Sea, founding of a Greek colony in Babylon, building of a large temple in Uruk (larger than the tower of Babel), increasing reclamation of land and foundation of smaller settlements in various regions and growing canalization, (cf. Diyala, Kish and Middle Euphrates surveys, Adams 1965, 1972, 1981; Gibson 1972), growth of Uruk (Finkbeiner 1991) and Nippur (Gibson 1992), and last but not least a continuing growth of the money economy in Babylonia. We see gradually wages being paid in kind replaced by wages in money, we see the operation of private entrepreneurs who profit from taxation measures (as we observe in the Muranu Archive, first half third century BC, Jursa 2006, and in the Rahimesu Archive 90s BC, Van der Spek 1998), we see the use of records of deposits used as bills of exchange (Stolper 1993).

## FINAL REMARKS

The present study does not lead to firm conclusions. There are too many uncertainties and too many questions remain. What I have tried to do is show some paths to further research into the effects of taxation in silver on the value of agricultural production and (world) trade, since the study of the purchasing power of silver, prices and wages in various regions of the ancient world should improve understanding of the workings of the ancient economy. I have highlighted the role of silver in economic developments. Silver has played a remarkable role in the economy of Near-Eastern/European civilizations during the last five millennia. Though seemingly of little practical use—you cannot eat it, nor make clothing from it, nor build houses with it—silver was accepted as means of exchange and accounting for nearly this entire period. For some reason it inspired confidence, and for some reason the increasing use of this commodity in exchange and accounting has helped boost commercial activities and growth of production, difficult as it may be to quantify. This study also shows how difficult it is to assess the role of silver as 'money' vis-à-vis as 'commodity'. Perhaps it was both simultaneously (as argued persuasively in Bresson 2005).

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## Demand Creation, Consumption, and Power in Ptolemaic Egypt

SITTA VON REDEN

The interdependence of power, demand, and development of markets was central to Rostovtzeff's concept of the Hellenistic economy.<sup>1</sup> Yet it becomes a rather different issue if it is not conceptualized within Rostovtzeff's modernizing model of an integrated Mediterranean market in the Hellenistic period. We need to trace the process by which new forms and contexts of consumption emerged, not just among Greek elites, courts, and kings, but more generally among Greek and possibly native households. This means that we need to explore changing patterns, rather than levels, of consumption by asking in what ways consumption habits changed under a new political and symbolic system, and how they were satisfied. Historians of consumption have long insisted that a central problem for economic history should be the question of how consumption turns into effective demand, that is, how and why consumers turn to markets rather than to other supply mechanisms.<sup>2</sup> This question has never properly been addressed in economic theory. Neo-classical thought takes for granted markets as a function of utility and scarcity, therefore not addressing the question under what conditions consumption turns into market-oriented demand.<sup>3</sup> Alternative theories have looked for supply mechanisms other than the market, such as redistribution and reciprocity. Within these models the need for staples and other goods were satisfied within a subsistence economy supplemented by reciprocal social exchange, or within centralized power structures in which subsistence goods are exchanged for services and agricultural produce. Yet neither did these

<sup>1</sup> Rostovtzeff (esp. 1935–6, 235, 239 f.) with Reger 53–4; Archibald 2001: 379–86; Morris 2005: 102–4; Manning 2005: 171–81.

<sup>2</sup> Fine and Leopold 1993, esp. 10, 47–53; see also Archibald and Davies in the Introduction to this volume.

<sup>3</sup> These questions have been addressed more systematically in anthropological research, see esp. Appadurai 1986: 29–41; also Foxhall 1998: 295–8, and the discussion by Morley (2007: 36–39).



paradigms, associated with the work of Karl Polanyi, offer a satisfactory model for the relationship between distribution mechanisms and consumption. As Mohammed Nafissi has commented, 'despite the many historical insights to be found in Polanyi's work, reciprocity and redistribution, the putative exhaustive patterns of pre-capitalist socio-economic integration, were conceived as harmonious entities (or eternities) immune to historical change. These concepts and the societies which they designated were so constituted because they were . . . conceived as . . . manifestations of the "unchanging essence of man as a social being".'<sup>4</sup>

A stronger focus on changing forms of consumption influencing demand, and economies more generally, is all the more timely as the most consequential periods of economic transformation in modern times have come to be explained in terms of changes in consumer behaviour rather than productive capacity.<sup>5</sup> Most ancient historians have argued in the past that the articulation of consumption in terms of market-oriented demand was dependent on increasing surplus production and monetization.<sup>6</sup> Yet also, and perhaps more importantly, households and communities had a variable capacity to consume, depending on the degree to which they were able to direct some of their income towards the market, and to which they had a marketable income at all.<sup>7</sup> What is more, the creation of market-oriented demand is a social and political process. As Fine and Leopold have argued, changes in patterns of consumption do not happen just because of a changing economic status of individuals and households, or a change of consumption ethics (consumption being regarded as either 'good' or 'bad').<sup>8</sup> Instead, consumption and the satisfaction of needs should be seen in connection with whole systems of provision which Leopold and Fine define as the social, political, transactional, and symbolic structures that influence the conditions and meaning of consumption.<sup>9</sup> The rather static notion of 'demand' becomes in this approach a more culture-dependent concept that includes considerations of the status of markets (and their alternatives), their meaning and integration into the transactional structure of particular societies. The rise of high-street retail trading and the emergence of department stores, for example, were key organizations for changing consumption habits in the food and clothing industries of late nineteenth-century Britain. They affected the nature of choice, information as well as the meaning, and frequency of purchase.<sup>10</sup>

<sup>4</sup> Nafissi 2005: 165 f.

<sup>5</sup> De Vries 1993: 1–20; 1994: 249; Fine and Leopold 1990: 120–38.

<sup>6</sup> Morley 2007: 43–46.

<sup>7</sup> *Ibid.* 43–49.

<sup>8</sup> Fine and Leopold 1993: 73–84 and 120–37, responding to McKendrick 1982: 53–66.

<sup>9</sup> Fine and Leopold 1993: 20–38.

<sup>10</sup> *Ibid.* 87 ff.

One system of provision that must be regarded as particularly relevant for the ancient world was the *oikos* with its interconnected social and economic functions, impact on consumption habits, social code, and technological know-how. But the polis as a social and political *kosmos*, for example, networks of *xenia*, the institution of *euergetism*, or even sacrifice, all combined some form of provisioning goods with particular social ideologies, distribution mechanisms, information systems, and development of know-how. Many scholars have demonstrated that these social and political contexts of distribution were not just political or religious in nature, but represented a system of provision that supplied vital needs to the community and gave meaning to forms of consumption in the Classical and Hellenistic period of the Greek world. Ancient markets, too, were systems of provision endowed with particular meanings and functions (including information) related to the political contexts in which they developed. Rather than being 'disembedded' (as Polanyi termed it), or just mechanisms (as in neo-classical economic theory), their function depended on the status, norms, and meanings associated with them.<sup>11</sup> Viewed from this broader perspective, the questions of whether and why there may have been an increase in consumption satisfied by markets in the Hellenistic period must include both a focus on changes in public (collective) ideology and in private (household/individual) behaviour.

The subject of this volume offers a suitable context for reconsidering the conditions of demand-creation in the Hellenistic world. Although we are lacking vital knowledge of how precisely the Hellenistic political regimes influenced and changed the nature of trade and market-exchange within and beyond the eastern Mediterranean, and how markets had functioned in the eastern states before the Greek conquest, we can explore the contexts in which market-oriented consumption may have increased. Thus, moving away from strictly economic issues of consumption, I would like to develop four tentative points:

1. Dionysiac ritual and the notorious profligacy of the Ptolemaic kings (*tryphē*) were not isolated political aspects of monarchic self-representation, but influenced consumption habits (especially of wine) penetrating down to the household level and becoming an important dynamic of Ptolemaic economic policy.
2. Staples, such as wine, grain, oil, and salt were markers of symbolic integration as well as differentiation and received particular attention from the Ptolemaic regime.
3. Key institutions such as the much-discussed Ptolemaic state monopolies, but also *sitometria* and *himatismos* (organized systems of grain hand-outs and clothing allowances to public and private employees), appear in

<sup>11</sup> For the classical *polis* I have tried to make this argument in relation to a broader anthropological debate; von Reden 1995, esp. 105–26.

a different light when viewed as 'systems of provision' structuring consumption, rather than as aspects of an exploitative fiscal regime, or responses to an archaic economy in kind.

4. Once the restructuring of consumption as a political *and* economic strategy of the Ptolemaic regime is established, it can be put back on the agenda of economic history. Increasing levels of consumption have long been abandoned as a single explanation for economic growth. But consumption politics combined with an interest in increasing the demand for market-supplied goods may account for some of the positive dynamics of the Hellenistic economy from the late fourth to the first centuries BC.

## INCREASE OF CONSUMPTION IN THE EARLY HELLENISTIC PERIOD

Let me begin by some comments on the notion of increased consumption during the Hellenistic period. There is a number of indicators that make it likely that there was an increase in the *level* of consumption (however provisioned for) during the early Hellenistic period. Although it would be premature to argue that there was *per capita* increase of consumption in the entire territory occupied by the Graeco-Macedonian kings, it can be argued that higher levels of consumption could be sustained in those areas dominated by Greek settlers than in the pre-occupation period.<sup>12</sup> As Walter Scheidel tells us, population figures and standards of living (i.e. consumption) are related factors.<sup>13</sup> So if the size of a population rises over several generations, it can be assumed that economic performance has increased (since more mouths are fed adequately), which in turn stimulates consumption and feeds back into positive population development. Ian Morris, moreover, has demonstrated that the population of Greek cities had increased continuously, and in some places rapidly, from the ninth to the fourth century BC. By the last quarter of the fourth century this increase came to a halt in the Greek cities, but shifted to peripheral areas in highland regions and the conquered lands in the East.<sup>14</sup>

Urbanization and the development of big towns, such as the capitals of Alexandria, Antiocheia, Seleukeia-on-the-Orontes, and Seleukeia-on-the-Tigris, suggest increasing population density from around the end of the fourth century BC onwards in parts of those areas conquered by the Macedonians. This shift may partly be explained by the movement of people through

<sup>12</sup> For the vital importance of differentiating between *per capita* and *aggregate* figures when discussing economic development, see Saller 2002: 258–64.

<sup>13</sup> Scheidel 2007: 50–5, with discussion and comparative literature.

<sup>14</sup> Morris 2005; Scheidel 2007: 44–50; van der Spek 2007: 426–30; Alcock 1994: esp. 187.

immigration, migration, and resettlement, but the population size and density of the Hellenistic capitals seems to have grown so substantially and so continuously that it cannot be attributed to population movement alone.<sup>15</sup> The population of Alexandria, for example, is currently estimated in the order of 200,000–500,000 inhabitants during the mid-third century BC.<sup>16</sup> The population of the ancient political centre of Memphis, by contrast, is regarded as unlikely to have exceeded 50,000–100,000.<sup>17</sup> Van der Spek, moreover, has pointed out that the physical size of Greek cities in Mesopotamia and Babylonia is incomparable to that of the old urban centres of those regions.<sup>18</sup> This might be explained by a greater degree of urban rather than rural living among the Greeks in the conquered countries, but—as again Scheidel (2007) tells us—population sizes of urban centres can only be sustained and increased if the negative factors of urban living, such as greater susceptibility to infectious disease, are set off by an absolute improvement of standards of living: that is, an improvement of nutritional and housing standards, clothing, feeding of infants, etc. The size of the Greek political centres thus strongly suggests that levels of consumption increased in aggregate terms, and that these levels—once again in aggregate terms—were satisfied adequately.

## THE DEVELOPMENT OF A PRODUCTIVE HINTERLAND

Any analysis of Ptolemaic internal economic politics must begin in the Fayum. Here, around 60-km south-west of Memphis, the cultivable area was doubled under the first two Ptolemies, serving as a major settlement area for Greek military settlers and civil immigrants. Because of its good connections with the Delta by land and by river, it was most likely aimed to serve as the hinterland for Alexandria approximately 200 miles away on the Mediterranean coast.<sup>19</sup>

The Fayum is usually regarded as a rather untypical place within Ptolemaic Egypt. For, although documentation is abundant, the degree of Greek presence was exceptional and Hellenization untypical for Egypt as a whole. Yet for our purposes it happens to be the best focus—after Alexandria where papyrological evidence is virtually absent. The proportion of Greeks in the Fayum was enormous. Third-century BC census data suggest that in one village up to 50

<sup>15</sup> For mobility in the Hellenistic age, see Archibald and Oliver in this volume.

<sup>16</sup> Rathbone 1990: 120 and 141 n. 41 for the larger figure; Manning 2007: 441 suggests 200,000.

<sup>17</sup> Thompson 1988: 32–5, suggesting a possible population in the range of 50,000 and 200,000, but likely closer to the lower end.

<sup>18</sup> Van der Spek 2007: 426 f.

<sup>19</sup> This point has been made persuasively by Manning 2005: 179.

per cent of the population could be Greeks, while on average they are estimated at 25–30 per cent of the Fayum population.<sup>20</sup> For Egypt as a whole, by contrast, the current estimate is around 10 % Greeks, with considerable local variation.<sup>21</sup>

The Fayum is a showcase of Ptolemaic interference with local structures and the cultural and economic aims of the Ptolemaic regime. In the 260s, when land reclamation was at its peak, the district was renamed from *limnē* ('the marshes') to Arsinoite nome, demonstrating its centrality to the Ptolemaic cultural landscape and its uniqueness in the Egyptian nome system, where dynastic references are the exception. In the early third century, the Fayum was regularly visited by the kings and by Apollonios the financial minister (*dioikētēs*), who was endowed with a large gift estate (*dōreia*) that formed about one tenth of the newly reclaimed area. Not only Apollonios, but also other Alexandrian officials owned in the Fayum large rural residences where they spent holidays or extracted surplus as absentee landlords.<sup>22</sup>

The Fayum was a site of agrarian experimentation: new crops were brought in from different parts of the Mediterranean and the conquered lands further east: wheat from Kalymnos and Syria, figs from Kos and Syria, garlic from Lykia, chickpeas from Byzantium, cystus from Karmania, vines from Chios and Knidos.<sup>23</sup> Visitors from Alexandria at one time were shown six different sorts of figs and twelve varieties of vines (*P. Cair. Zen.* 59033 (third century BC)). Walnuts, peaches, plums, and possibly apricots were sown in the royal nurseries in the northern city of Memphis for planting out on the land of Apollonios' estate.<sup>24</sup> Different breeds of sheep were introduced in order to improve the quality of the wool.<sup>25</sup> Agricultural experimentation made sense in a context where supplies from the wider Greek world were fashionable, but import by sea dependent on the vagaries of the changing political conditions within the Mediterranean. Some of this produce remained in the Fayum adorning the tables of the local Greek elite, but much of it was transported to Alexandria where it celebrated the domestication of Hellenism. The degree to which consumption and local innovation engaged in a wider Greek discourse about imperialism and what it meant to be Greek may be glimpsed from a dietary observation made by the medical writer Diphilos of Siphnos. 'The cabbage that grows in Kyme', he writes, 'is very good and sweet, but in Alexandria it is bitter. Seed brought from Rhodes to Alexandria produces a cabbage which is sweet for the first year, but after that it becomes acclimatized'

<sup>20</sup> Clarysse and Thompson 2.90–102.

<sup>21</sup> Rathbone 1990: 113.

<sup>22</sup> Thus, e.g. Diotimos the *hypodioikētēs* of Alexandria under Ptolemy II; see Vanderborght 1942: 117–128.

<sup>23</sup> Thompson 1984: 363–70; 1999b: 133–5; Reekmans 1996: 135–6.

<sup>24</sup> Thompson 1999b: 133.

<sup>25</sup> Van Minnen 2001: 1269 with n. 17 and Athen. 5.200b–c.

(*epichōriazei*, Athen. 9.369a). It is hard to tell whether this was a real record of unsuccessful agricultural innovation or a further tale of eastern—that is Graeco-Egyptian—inferiority.<sup>26</sup>

Experimentation aimed mostly at satisfying the consumption needs of Greek urban elites and those who emulated their aspirations in the countryside. The Zenon archive offers a broad perspective on how prosperous Greeks competed among themselves, or against others, by the consumption of chosen products: sweet wines, superior honey, colourful coats, extraordinary fish, cheeses, and oils imported from other parts of Egypt or the Ptolemaic possessions.<sup>27</sup> Of more general significance was the boosting of viticulture, the transition from emmer to durum wheat, and the maintenance, by contrast, of Egyptian types of oils, most notably sesame and kroton. According to Herodotos the Egyptians drank beer and ate bread made from a type of wheat called in Greek *olyra* and by modern scholars is identified as a variety of hulled emmer (Hdt. 2. 77. 4). Herodotos' observation was not wrong, but it suggests above all what the Greeks were most eager to change when becoming associated with this new cultural environment.

## THE SCALE OF VITICULTURE

Evidence for the planting of vineyards occurs in the earliest papyrological documentation and went together with works on drainage and irrigation at the beginning of the development of the Fayum. Work on vineyards was included in the contracts for irrigation work, and the irrigation engineer Kleon, involved in the early reclamation project of the Fayum, displayed a keen interest in the development of vineyards in his area of competence.<sup>28</sup> Vineyards do not compete with most of the arable land in Egypt. They depend on a year-round but controlled supply of water provided by wells or ponds and are situated on high land rather than the basins or *perichōmata* watered by the natural inundation of the Nile.<sup>29</sup> To engage in viticulture was not the decision of an individual alone, but required the cooperation of an administration developing suitable land with individuals cultivating it with the new crop. The Ptolemies encouraged viticulture by their reclamation initiatives. They also rewarded owners of vineyards with a favourable tax rate.<sup>30</sup> According to the *Papyrus Revenue Laws* one tenth rather than one sixth of the produce had

<sup>26</sup> Thompson 1999b: 133.

<sup>27</sup> Reekmans 1994: 119–130; 1996: 50–71.

<sup>28</sup> Thompson 1999a: 108–10.

<sup>29</sup> Van Minnen 2001: 1270.

<sup>30</sup> See also Gabrielsen in this volume.

to be paid as *apomoira* (tax on vineyards and orchards designated for the cult of Arsinoe II in Egyptian temples throughout Egypt) on vineyards in the Thebaid, where little wine had been grown previously, and in the *dioikēsis* of Simaristos, an area in the Oxyrhynchite nome which had only recently been brought under cultivation.<sup>31</sup> By this tax privilege cultivators were put on the same level as active Greek soldiers who also paid the lower tax. The tax privilege is significant within an incentive structure that typically combined economic privileges with a rise in status.

Viticulture concentrated in the Delta and the Fayum, where total output outgrew the annual consumption of the total production, and massively outgrew the annual consumption of the Greek population in the Fayum. From a second-century *apomoira* account it has been estimated that the total output of wine in the Fayum of that year was in the order of 220,000 hl. (*P. Köln V* 221).<sup>32</sup> Depending on average daily consumption rates (c. 0.5l per day) and estimated population figures in the Fayum (c.70,000–100,000<sup>33</sup>), this will have been sufficient to supply 4–8 times the Greek adult population in the Fayum, or twice its total adult population. If one uses the upper marks of these estimates, it may just be reasoned that it was enough to supply a large part of the Greek adult population (c.175,000–350,000) in Egypt with local wine.<sup>34</sup> Most of this wine was marketed, as we shall see below. But because of its inferior quality, Egyptian wine was not exported. Imports of wine from Greece via Rhodes, by contrast, were massive and add to the impression that the consumption of wine far exceeded what might have been needed by the Greek population in Egypt.<sup>35</sup>

Viticulture took root among the Egyptians as well. In Upper Egypt, tax receipts for the *apomoira* are among the most frequently attested, surpassed only by the poll taxes, the burial tax, and the *enkuklion* (house sales tax).<sup>36</sup> Production of wine, however, does not mean consumption of wine. And indeed, fewer *oinokapēloi* appear in the tax-lists of the Fayum than *zutopōles*, licensed beer brewers, and do not quite match the scale of the increase in wine production in the district. Only in the Roman period does the documentation of beer consumption decline until it totally disappears in the third century AD.<sup>37</sup> Still, the degree to which Egyptians were stimulated to engage in viticulture, and subsequently seem to have adopted its consumption, suggests

<sup>31</sup> Clarysse and Vandorpe 1998: 18 ff. with *P. Rev.* 24, 11.

<sup>32</sup> Clarysse and Vandorpe 1997: 67–70.

<sup>33</sup> Rathbone 1990: 132; Clarysse and Vandorpe 1997: 70–3 use a figure of 50,000 adults for their calculations.

<sup>34</sup> On the assumption of 5–10 per cent Greeks in a total population of 3.5–4.5 million; Manning 2007: 441.

<sup>35</sup> Gabrielsen 64–74.

<sup>36</sup> Muhs 2005: 61 ff.

<sup>37</sup> Thompson 1999b: 133–4; van Minnen 2001.

that the Ptolemies were able successfully to transform drinking habits in the area of their influence.

## CHANGES IN CEREAL PRODUCTION

The Ptolemies also radically transformed cereal production and consumption. This served in the first instance the needs of the capital, the immigrants, the administration, the army and, above all, the Ptolemaic export markets. The army and the civil administration in particular were regular consumers of grain (as well as wine) and provided a stable as well as state guaranteed form of demand. Grain was sold to these groups rather than distributed in an economy in kind, as there are many examples of grain being purchased by Ptolemaic officials (the so-called *sitos agorastos* that appears in accounts) as well as of generals buying rations for their soldiers rather than using tax grain.<sup>38</sup>

*Olyra* or tetraploid emmer wheat (*triticum dicoccum*) had been the major bread cereal in Egypt well after other parts of the Mediterranean had adopted naked wheats, such as tetraploid hard wheat (*triticum durum*), or hexaploid bread wheat (*triticum aestivum*).<sup>39</sup> This does not mean that Egypt was odd or backward. The variety of emmer that is paleo-botanically attested in ancient Egypt can be threshed more easily than its Greek counterpart, and because of its high gluten content is more suitable for baking bread than durum wheat.<sup>40</sup> Its suitability for baking made Egyptian emmer a more flexible crop and thus more useful for differentiated distribution of breads. While durum wheat usually produced in antiquity only a rather coarse bread, and for finer loaves other wheats had to be used, from Egyptian emmer very fine breads could be made.

*Olyra* continued to be cultivated in the Ptolemaic period but durum wheat soon dominated the Fayum and was in time adopted throughout the country. In a crop report of 235 BC that covers almost half of the total Fayum, Greek wheat made up almost 75 per cent of the crops, barley 15 per cent and *olyra* less than 2 per cent. In the crop distribution of Kerkeosiris, admittedly a highly Hellenized village in the Fayum, *olyra* accounts for less than 1 per cent of the total crops in the year of 121/0, and is absent in the years thereafter.<sup>41</sup> In Greek papyri *olyra* was used for feeding slaves, prisoners, and possibly free labourers

<sup>38</sup> von Reden 87, 283 f. with *P. Lond.* VII 1934 (Antiochos needing money for rations).

<sup>39</sup> Sallares in *OCD*<sup>3</sup> s.v. *cereals*; Sallares 1991: 371; Zohary and Hopf 2001: 39–53 for the classification of and evidence for cereals in the ancient Mediterranean.

<sup>40</sup> R. Germer *LÄ* vol. VI s.v. Weizen, 1209–10; Germer's assumption that *triticum aestivum* was grown in Pharaonic Egypt is not confirmed by the archaeological evidence from Karanis, van Minnen 2001: 1271; see also Mayerson 2002: 210–13; and Berlin et al. 2003.

<sup>41</sup> Thompson 1999b: 130; Schnebel 1925: 97–100.



on the dyke system, but from the *sitometria* accounts of the Zenon archive it is totally absent, even when hand-outs to Egyptians are concerned. Greek wheat, moreover, became the official grain accounting standard in which payments in kind were reckoned. Its relation to emmer and barley was calculated at a fixed ratio, as were conversion rates with other goods.<sup>42</sup> Official penalties of unpaid harvest taxes were calculated on this standard from the earliest extant examples onwards, so that the monetary function of wheat encouraged the switch from emmer to durum wheat as food. In some contrast to the proportion of wine sellers to beer brewers in Fayum census lists, moreover, *sitopoioi* in comparison to bakers of emmer bread (*artokopoi* or *olyrokopoi*) predominate among the number of bakers attested in the Greek documentation.<sup>43</sup> Although this says little about reality, it tells us much about Greek perception, and about the degree to which *olyra* consumption was eliminated from their cultural horizon. The large numbers of demotic tax receipts for the harvest tax in the Thebaid give no indication of the cereal in which taxes in grain were paid, but Upper Egyptian demotic land leases from the second century BC specify rents in kind. Twenty four contracts are preserved and edited, two have an unspecific payment clause (*P. Gebelen Heid.* dem. 14; *Tor. Botti* dem. 25 C, and in three the clause is not preserved (*Cair.* dem. II 30 783+; *Reinach* dem. 5; *P. Ryland* dem. 26).<sup>44</sup> In the rest, payment is specified in terms of durum wheat. In half of these payments, wheat may be wheat equivalent, that is, just a monetary standard, but in the other half the rent is related directly to the crop cultivated.

Marriage contracts, too, allow some insight into the transformation of a food regime. Sixty-five contracts are extant from the late ninth to the first century BC, of which fifty-five belong to the Ptolemaic period.<sup>45</sup> Throughout the period the contracts follow a conventional pattern, which on the one hand makes them comparable through time, but on the other renders them somewhat problematic as evidence for living practice. Nevertheless, in the so-called maintenance clause these contracts regularly specify the liabilities of a husband to his wife during marriage, which comprise oil, clothing, and wheat. Payment of emmer (*bd*) dominates the sample, but in the third-century BC documents from Thebes unspecific 'k (grain) becomes frequent and in the documents from Assiut and Thebes durum wheat (*sw*) appears from the second quarter of the second century onwards.<sup>46</sup> How these contractual

<sup>42</sup> Muhs 2005: 26.

<sup>43</sup> Thompson 1999b: 129–30 with *Prosopographia Ptolemaica*. 5.12597–663.

<sup>44</sup> Felber 1997: 7–64; 152–4 (list of contracts and clauses); the contracts come from Gebelein, Assiut, Thebe, and the Fayum in Lower Egypt; Vandorpe 2000: *passim* for a discussion of Ptolemaic grain taxes.

<sup>45</sup> Lüddeckens 1960: 9–141, 367–70 (list of contracts and clauses).

<sup>46</sup> Lüddeckens 1960: 259–60.

obligations translate into real consumption practice is a moot point, but it is noteworthy that Greek wheat had by the third century BC affected the formulaic construction of a highly patterned Egyptian interpersonal agreement.

## MONOPOLIES

Salt and oil constitute contrasting cases to wine and wheat. Olive oil, so typical for the Mediterranean Greek diet, played hardly any role in Ptolemaic Egypt. Although olives were cultivated in the Fayum on the margins of the cultivable area unsuitable for cereal agriculture, they were eaten as fruits and did not compete with sesame for cooking and *krotōn* or *kiki* (castor) for lighting. It has been argued that olive trees take a long time to develop, and that olive oil production, since trees do not grow well on Egyptian arable land, required a degree of intensive agriculture which had not spread widely in Ptolemaic Egypt.<sup>47</sup> Thus the replacement of native Egyptian with Greek olive oil would have presupposed a potentially dangerous amount of interference with the balance between cereal and fruit growing that was necessary to sustain the population of Egypt. In stark contrast to the case of wheat, the Ptolemies do not seem to have been interested in developing olive oil as a commodity for export.

Both the traditional Egyptian oils and salt were produced and distributed within the so-called Ptolemaic monopolies. The term derives from the model of the Ptolemaic centralized state economy, which is becoming increasingly obsolete<sup>48</sup>, but in Greek texts they were simply called *ōnai* ('purchases')—industries which belonged to the state but the revenues from which were purchased for a fixed sum by the highest bidder. The buyers made a cash payment to the *basilikon* (royal treasury) in turn for producing and/or retailing the monopolized good. The state monopolies were the result of the negotiations between the Ptolemaic kings and the Egyptian priesthoods who, for the loss of the income from traditional temple industries, were compensated for by regular monetary subventions (*suntaxeis*).<sup>49</sup> But the takeover of the major temple industries by the state also meant an appropriation of a system of provision that had been associated with the social and religious tasks of the local temples.<sup>50</sup> This considerably reduced the economic power

<sup>47</sup> Van Minnen 2001: 1267–8; Meeks 1993: 5–8; see also Thompson 1999b: 131–3.

<sup>48</sup> Manning 2005: 176–18; 2007: 442.

<sup>49</sup> Manning 2007: 444; Thompson 1988: 110–12 for a more cautious assessment of the role of *suntaxeis*.

<sup>50</sup> Otto 1908: 352 ff.

of the pre-Ptolemaic temple economies and increased the influence of the central Ptolemaic administration, which now took over both the provision of, and revenue from, some important staples. But the monopolized goods were not transferred fully to the open market. For although oil, salt, beer, cloth, lentils, and many other consumption goods were now sold for money, their prices were fixed and the administration took over responsibility for their sufficient supply and proper distribution. From the *Revenue Laws* once again we know how monopolies worked in practice.<sup>51</sup> Rights to the revenues of production and marketing were sold annually to entrepreneurs by auction, while tools and presses were provided by the administration and the process from cultivation to sale was closely supervised by officials. Retail prices were fixed and surplus produced in one district was transferred into areas of underproduction according to a detailed decree (*diagramma*) instructing the local administration.<sup>52</sup> At the level of the consumer this made some difference. For now these goods had to be purchased with coinage that once again linked the consumers to the power and administration in Alexandria. The main means of payment and exchange in Ptolemaic markets had become state-issued coinage.

Let us turn from oil to salt, a staple that is often neglected by scholars of the classical Greek period. Salt is as central to the human diet as carbohydrate or water. In the 260s, Ptolemy II introduced a small annual salt tax which functioned as the major capitation tax together with the one-obol tax levied on men only.<sup>53</sup> The salt tax amounted to 1½ drachmas per male and 1 drachma per female per year in the first instance, was reduced to a smaller rate by Ptolemy III, and by the end of the third century BC abolished. It seems that at least one of the functions of the monetary salt tax had been to spread the circulation of cash among Egyptians. For compulsory labour, too, was from the Ptolemaic period onwards paid in cash and will have provided the means of paying the salt tax in areas little affected by the Ptolemaic monetary economy.<sup>54</sup> In the Thebaid the salt tax seems to have replaced the so-called yoke tax which was either a tax on drought animals or human 'necks'.<sup>55</sup> The salt tax must have been a general consumption tax, for in a Greek marriage contract its payment is regularly linked to the provision of clothing, shoes and food by the husband to his wife. A Berlin papyrus says that Akesandros will provide for Philotera, a woman from Crete, clothing, shoes, as well as food, making provisions for the salt tax (*BGU VI 1463* (246 BC) Elephantine). The older yoke tax, by

<sup>51</sup> *P. Rev.* cols. 38–56 (administration of oil monopoly) 62–72 (distribution among districts); Austin<sup>2</sup> no 297; for the context, see Bingen 2007: 157–88.

<sup>52</sup> Von Reden 94–5.

<sup>53</sup> Clarysse and Thompson 2.36–90: 1995: 223–9.

<sup>54</sup> Von Reden 60–2. <sup>55</sup> Muhs 2005: 30–34.

contrast, had not been levied on individual consumers but was calculated according to the number of free adult males in one household. Its monetary rate was much higher than the total payment for a typical conjugal household with one or two slaves, and is likely to have been payable by a certain range of more affluent households only. The salt-tax provided the most regular revenue for the local administration, but, if compared with the yoke tax, it created a new symbolic structure within Egypt. All inhabitants of Egypt, male, female, free and unfree, were taxed, in return for the provision of salt by the royal administration. Very few were exempted, but the circle of the privileged is significant: teachers of Greek and their families, athletic coaches, actors, and victors in the Alexandrian games as well as the *Basileia* and *Ptolemaia* festivals. For their service to the ideological foundations of the Ptolemaic state, one might suggest, they were singled out from the generalizing rhetoric of the salt-tax regime and allowed to consume salt tax-free.

Wine, wheat, oil, and salt—four staples with a very different social life according to the different places they occupied in the self-perception and self-representation of the new regime. Broadly speaking, wine and wheat differentiated Greek and Egyptian culture, representing Greek culture, and its cultic role in guaranteeing the prosperity of Egypt, its seasonal and cyclic regeneration and rebirth, as well as the willingness of individuals and groups to adapt to, and co-operate with, this regime. Here the Ptolemies and the Greek administration made particular efforts to increase consumption of wine and Greek wheat through agricultural innovation and institutional change. In their politics towards salt and oil, by contrast, the Ptolemies and the immigrants more willingly adopted existing structures, although the institutional context in which these staples were distributed changed. Forming a particular system of provision, their production and supply was closely bound up with the Ptolemaic administration. It is likely that the supply of salt and oil to all parts of the population throughout Egypt improved, as well as becoming associated with the central power of the Ptolemaic monarchy rather than the role of local temples.

## SITOMETRIA AND HIMATISMOS

Before turning to some general perspectives on consumption in Ptolemaic economic history, I would like to look very briefly at one institution that belonged to the very anatomy of ancient Egyptian civilization and became a central institution of the Ptolemaic economy as well.

*Sitometria*—daily payments of bread—survive to us mostly in the form of entries in the accounts of bakers and granaries. Yet *sitometria* did not just involve the pragmatism of feeding people; from the Pharaonic period it

was an ambitious economic business emanating from a particular code of conduct.<sup>56</sup> Apportioning fixed quantities of grain—paid in the form of loaves containing the prescribed quantity of flour—was inseparably linked to the pay structure of Ptolemaic public and private work contracts, but also to marriage, hospitality, patronage, and festivals.<sup>57</sup> People fed on daily rations on large estates ran into the dozens, if not hundreds, and so did the provision of bread to workers on the dyke system, at the occasion of festivals or during royal journeys. Both Pharaonic and Ptolemaic documents show that *sitometria* involved an efficient operating system as well as meticulous accounting, starting at the threshing floor and ending in the bakeries. *Sitometria* was a regular part of the wage to short-term and permanent employees in Apollonios' Alexandrian household and his Fayum estate. It was usually combined with cash, and in some cases oil and a clothing allowance.<sup>58</sup> Wine could be received against a reduction of a cash salary only. The origin of this payment system in pre-Ptolemaic Egypt is noteworthy. Even more noteworthy is the fact that the twin-relationship of bread and beer which appears time and again in pre-Ptolemaic funerary paintings and texts was dropped under the Ptolemies in favour of bread and cash. For beverages (either beer or wine) payees were referred to the monetized market, thus considerably extending the importance of this supply system, and eliminating beer from the social practice of provisioning.

The composition of payment in cash and in kind was an indicator of the proximity of the payee to the paymaster, whose own position was reflected in the care he devoted to his dependants and employees. Zenon's protégés, who addressed him as 'father', and a range of permanent employees, received not only bread and cash, but also oil, clothing allowances, and wine, while occasional workers were paid off with loaves and cash only. Loans of clothing money for being able to dress adequately on a journey are among the most frequent requests for loans of money addressed to Zenon by his employees and dependants, showing the degree to which the employer himself was implicated in the status game of his employees.<sup>59</sup> Social hierarchy, moreover, was expressed by payments in kind. Most ordinary workers on Zenon's estate received bread made from wheat milled into *autopuros*—unsifted flour. Higher status recipients like Zenon himself, his peers, his brother Epharmostos, and the teacher Styrax were apportioned bread from sifted flour—*aleuron katharon*; and an even finer variety, *semidalis*, possibly made from a different type of wheat, was handed out to guests or at the occasion of a festival. Low-status slaves and animals, by contrast, received a mixture of wheat and barley,

<sup>56</sup> Kemp 1989: 117–28.

<sup>57</sup> Reekmans 1996: 133–9; 1966: 9 ff.; Orrieux 1981: 319–27; Franko 1988: 13–88; von Reden 138–41.

<sup>58</sup> Von Reden 138–44.

<sup>59</sup> Ibid. 236 f.

*krithopuros*. Payments in *olyra*, as we already noticed, are absent from Zenon's records. Amounts, by contrast, were extremely standard, varying only in relation to the flour used.<sup>60</sup> Principals, that is, people who were in control of a pyramid of socially and economically dependent people, were morally obliged to maintain a certain standard of food consumption and well-being among their dependants, but they also had the power of regulating social differentiation through a structured system of payments in kind.

The significance of payments in kind lay in their capacity to control quality and quantity of consumption. At the same time, they represent a system of provision that was maintained not by markets, but by moral and social codes, articulating patronage, marriage relationships, and the hierarchical order within households.

### PTOLEMAIC STATE, DEMAND, AND THE DEVELOPMENT OF MARKETS

If we accept the previous argument that wine and (Greek) wheat consumption increased significantly in Egypt under the Ptolemies, and that the salt and oil supply was appropriated from the Egyptian temples, a differentiated picture of new (market-oriented) demand emerges. The appropriation of the salt and oil industry (as well as of other monopolized goods) increased the status of markets associated with the central power of Alexandria and its local administrations among the native population, while it made these goods accessible to the Greek immigrants who stood outside the social relationships controlled by the native priests. Wine was produced above all in the Fayum, but retailed in large quantities throughout Egypt and Alexandria. In addition there were massive imports from the Greek world to the capital and the *chōra*, as the large number of Rhodian amphora handles found in Alexandria most impressively suggest.<sup>61</sup> One cannot escape the assumption that the large degree of wine consumption in Ptolemaic Egypt was related not just to the number of Greek immigrants, but also to the degree to which Dionysiac ritual and the worship of Arsinoe became central to the Ptolemaic dynastic cult.<sup>62</sup> Thus being intimately linked to Greek culture and royal ritual, and becoming the most important cash-crop in Egypt, it gave its market a particularly high status. The demand for wine increased to the extent to which Greek culture took root in Egyptian society in the course of the Ptolemaic era.

<sup>60</sup> Reekmans 1966: 9.

<sup>61</sup> Gabrielsen 64–74; esp. 72 for discussion; see also Lund, this volume.

<sup>62</sup> Schneider 2000 offers an excellent argument for the link between feasting, politics, social integration, and wine consumption in the dynastic (Dionysiac) rituals of the Hellenistic empires.

Grain was an ambivalent staple. Being a means of payment itself, and being both marketed for cash and distributed in kind, it affected market-oriented demand in different ways. The army was a regular consumer of home-produced wheat and thus a demand-creator of the first order. The population of Alexandria, too, will have consumed Greek rather than traditional Egyptian wheat, and thus made this cereal the major cereal in the market. But the transformation of the Egyptian cereal economy from *triticum dicoccum* (emmer) to *triticum durum* (durum wheat) had effects above all in those Mediterranean markets in which the Ptolemies participated.<sup>63</sup> By radically altering the production and consumption regime within Egypt, the Ptolemies linked its resources to the demand structure of the Hellenistic world, which in turn affected Ptolemaic imports of foreign goods and money. The latter was crucial for lubricating the market within Egypt. In total, these cultural, political, and economic transformations affected the level of market-oriented consumption in Egypt and the capacity of both Egyptian and Alexandrian markets to develop. At the same time the conditions improved for supplying these markets with foreign goods.

Lines of communication with the external world were improved or restored for what can only be called a symbiosis of military, political, and economic purposes. In 270/69 the Pithom canal was restored, linking the Nile Delta via Pithom with the Red Sea at the border between Egypt and Syria-Palestine.<sup>64</sup> New harbours were founded under Ptolemy II on the coastal line between this canal and the strait of Bab-el Mandeb, such as Arsinoe, Myos Hormos, Philoteras, Leukos Limen (linking the Nile and the Red Sea at their shortest distance) and Berenike Trogydytike, the terminal point of a caravan route that Philadelphos had established through the Eastern desert down to Koptos. Ptolemy III founded Adulis on the island of Eritrea which was an important base for the Ptolemaic elephant hunt, and again the beginning and terminal point of a caravan route leading inland into India.<sup>65</sup> More typically Greek was the Ptolemaic orientation towards the Cyclades, Rhodes, Asia Minor, and Cyrene where conquest, alliance, or political influence allowed the peaceful use of existing, or the foundation of new harbours, for both military and economic purposes. The need for war materials and war elephants allowed other goods to travel along these routes (such as spices, incense, textiles, metals, wood, ship-building materials, and so on), while police forces and military bases helped to secure the coastal line of the Red Sea which was vital for commercial exchange to flourish. Similarly along the Levantine coast: the Phoenician towns Sidon, Tyros and Byblos not only served as military bases,

<sup>63</sup> For those markets, see below.

<sup>64</sup> Beyer-Rothhoff 1993: 237–214; Hölbl 1994: 55 f.; and still Rostovtzeff 1932: 742 for this and the following.

<sup>65</sup> Manning, this volume.

equipped with military harbours and a mint, but also gave access to the Lebanon, the Indian caravan routes, and the dockyards of the towns themselves. This combined policy of securing Egypt and gaining access to the south eastern trade routes was not new under the Ptolemies, but it was more systematically undertaken and, during the third century, more successfully so.

## CONCLUSION

All people consume. But in order to affect an economy, consumption has to turn into effective demand. I have argued that the transformation of major consumption habits in Egypt and the appropriation of temple industries by the kings led to a considerable increase of the consumption of wine, oil and probably salt supplied via markets. Wine was associated with Greek culture, and the various groups of military and civil immigrants were its foremost consumers. However, the extensive Dionysiac rituals involving wine consumption in Alexandria, the cult associations supporting these rituals in the capital and *chōra*, and the Egyptian-wide cult of Arsinoe II to which the *apomoira* was dedicated gave the consumption of wine added symbolic meaning. The efforts undertaken by the first Ptolemies to increase production and distribution of wine should not be seen just in functional terms as a means of supplying a limited number of Greek subjects and soldiers with their preferred drink. Rather, a combination of ideology and taste increased the status and level of wine consumption throughout Egypt.

Native Egyptian oil, beer, and salt were produced and supplied in a different organizational structure than cereals and wine, but they, too, affected levels of demand. For, although the control of their production and distribution will have been motivated by fiscal considerations in the first instance, it is likely that they were distributed more efficiently under central fiscal control. Their sale in the market increased the circulation of money and the monetization of native households. The commodification that staple foods and drinks underwent under the Ptolemies was intimately linked to the introduction of coinage, in turn increasing the capacity of households to consume goods available for cash only. But monetization, too, was dependent on a combination of fiscal, economic, political, and symbolic efforts.<sup>66</sup>

The continuity of alternative systems of provision, persevering above all in the *chōra*, negatively affected the degree of market-oriented demand resulting from the new consumption regime of the Ptolemies. Many households continued to be supplied with grain through the traditional system of *sitometria*,

<sup>66</sup> As I have tried to demonstrate in von Reden esp. 31 ff. and 296 ff.



which did affect consumption but did not increase market activity. In contrast to wine which was occasionally supplied to individuals and households by being offset against monetary salaries, *sitometria* represented a system of provision independent of monetization and markets.<sup>67</sup> The significance of the transformation of cereal production and consumption in Egypt must be seen in relation to the preferences of the army, the inhabitants of the capital of Alexandria, and consumers outside Egypt who paid for wheat in cash. Playing a vital role for the cash supply of Egypt, its effects on demand within Egypt lay as much in this role as in the need for food among the population of Alexandria.

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<sup>67</sup> As I have tried to demonstrate in von Reden esp. 142.

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## Afterword

VINCENT GABRIELSEN

Have we succeeded in our collective undertaking, and if so, how far? Ultimately, this question will be answered by the readers and reviewers of the present volume. However, in offering an Afterword which sums up the central messages of our essays, the group of editors deemed it fitting to let their final remarks encompass a certain measure of self-evaluation. We do so here, not by following the author-by-author résumé format, but by relating the main insights that these essays collectively provide about the economies of Hellenistic societies to two things: first, to the broader question about the historical place and role of these economies within a much longer chronological sweep; and secondly to the conceptual framework and its attendant methodology that are sketched in our Introduction. Even though it was not imposed by editorial decree, the bottom-up approach has been applied—admittedly, not with an equal degree of vigour—by all contributors; arguably, it has once more shown itself to be a fairly dependable and fruitful way of piecing together the formidable jigsaw puzzle that we call Hellenistic economies. Thus what has come out of this series of detailed, evidence-based explorations may, in a sense, be compared to the unfolding of an umbrella: like the pattern formed by its metal rods, the nineteen essays in this volume, each investigating a specific topic, radiate towards different points in the compass; yet they do so from a common centre.

One common concern is, whenever possible, to set the spotlight on a particular side of economic activity, that of demand creation and demand satisfaction. Traditionally, it is indeed supply that receives most of the attention. The majority of scholars who have been studying the economic life in Classical Antiquity have preferred to follow closely the lead of specialists who scrutinize the Industrial Revolution, the economic history ‘world event’ *par excellence*, and whose considered opinion is—in the words of a leading representative—that ‘The determination of “when”, “where”, and “how fast” are to be sought first and foremost in supply, not demand-related

processes'.<sup>1</sup> Far from proposing a return to such a simple, linear conception of demand as that of Rostovtzeff (e.g. *SEHHW* 1026), or a neglect of the supply-side, we simply wanted to see whether the evidence from Hellenistic times showed demand to possess properties and dynamics comparable to those which specialists in the economic history of early modern societies have identified as crucial economic determinants. A most important property, these argue, is the propensity of demand in pre-industrial societies to transform a basic economic unit, the household, through the piecemeal relocation of labour from goods and services for direct consumption (autarchy) to marketed goods; what sets this process into motion is the adoption of a new strategy for the maximization of household utility.<sup>2</sup> Directing our inquiry towards the issue of demand creation in our period and geographical area seemed to us therefore a most pertinent line of action. Who were the demand creators? What kinds of demand did they create for goods and services? And what was in each case the short- and long-term impact of demand both on the basic economic unit selected for analysis and on the economies of Hellenistic societies at large?

In this volume, the basic unit is not only the ordinary household, but also, indeed especially, such socio-politically more complex entities as large agricultural estates, temples, cities, kingdoms, and even peoples. Our essays, including the ones that address the question of demand in an indirect way, identify several spheres in which the pace, nature, volume, or geographical reach of economic activity were affected noticeably by an increase (documented or inferred) in existing demand and the creation (documented or inferred) of new demand: not only for money, materials, foodstuffs, manpower, settlements, etc., but also for such less tangible 'goods' as risk-reducing institutions, improved management techniques, and a larger cultural space. The latter area, cultural space, also provides an example of how much still needs to be done before a fuller appreciation of the demand-related processes is reached. The insatiable 'civic performance consumerism' of the Hellenistic city has been adequately studied as the phenomenon that spawned the civic benefactor. As a demand-creating phenomenon, however, it largely remains unexplored, with the result that we still know little about how an amalgamation of politico-military imperatives, cultural priorities, religious concerns, social considerations and purely material interests locked demand-creator and demand-satisfier into a spiral of mutual exchanges, of which the main *economic* component was the benefactor's wealth-producing initiatives. But, that said, it

<sup>1</sup> Joel Mokyr, 'Demand vs. Supply in the Industrial Revolution', *JEH* 37 (1977): 981–1008, repr. in J. Mokyr (ed.), *The Economics of the Industrial Revolution* (London and Totowa, NJ, 1985): 97–118, esp. 110.

<sup>2</sup> Jan de Vries, 'The Industrial Revolution and the Industrious Revolution', *JEH* 54 (1994): 249–70, esp. 255, 257.

must be granted that in this area our essays have made a cautious beginning, and that the overall picture they draw is fairly clear.

Above all, they demonstrate even more forcefully than *HellEcon* I and *HellEcon* II that our Hellenistic societies, while they went on battling with traditional constraints imposed by nature or man, and while they kept on practising the old agro-pastoral ways, were indeed also deeply engaged in the process of transforming and expanding their economic activities and behaviour. Moreover, they were doing so to such an extent as to accumulate the critical generative mass (*cambium*, *Wachstumschicht*)—material as well as institutional—on which a further transformation, expansion, and growth was to take place under the political dominance of Rome. Already the analyses undertaken in the essays that look at managing the demands of new territories, and those that explore creative management in the old and new worlds, render credible the view that a combination of factors—a prominent one being increasing demand—was eroding autarky as a mode of economic behaviour at the same time as the other two modes of behaviour—those of ‘command’ and ‘the market’—were expanding their field noticeably, even if in different degrees. The essays of this volume propose that, compared to what came before, the three centuries after c.330 BC saw an economic transformation of the first order, a transformation that with full justification can retain the politico-cultural description ‘Hellenistic’. One way to test the validity of this proposition, and the merits of the bottom-up approach, so far is to see what happens if we apply the reverse procedure: is the general (i.e. *our* general) contained in a *new*, still untried particular? Or, put metaphorically, if we now fold our umbrella, do the rods point in a common direction?

Accordingly, to the three historical examples we presented in Section III of our Introduction as illustrations of our overall aims and methodology, we may here, in closing, add a fourth one. It is a newly published tomb epigram on a limestone plaque from Alexandria in Arachosia (modern Kandahar), dated to the late second century BC. In a finely crafted poem of ten elegiac couplets which uses archaizing Greek, the inscription gives a succinct account of the achievements of Sophytos the son of Naratos, the scion of a Hellenized Indian family. An akrostich formed by its twenty verses reads ‘through the efforts of Sophytos son of Naratos’, presumably indicating that the poet was Sophytos himself. The text deserves to be quoted in full:<sup>3</sup>

For a long time the house of my ancestors had been thriving  
 When the unbeatable violence of the triple Fates destroyed it.  
 But I, Sophytos of the Stock of Naratos, all together so small  
 And pitifully bereft of the support of my parents,

<sup>3</sup> SEG LIV. 1568. Edd. princ. P. Bernard, G.-J. Pinault and G. Rougemont, *JS* (2004): 227–332. English translation slightly adapted from Julia Lougovaya’s review of SEG LIV in *Bryn Mawr Classical Review* 2009.11.24 (p. 3).

Practised the excellence of the Muses and the Shooter  
 Mixed with noble prudence  
 And devised a way to build up my ancestral home again:  
 With fruit-bearing money (*teknophoron argyrion*) taken from elsewhere  
 I went away from home determined not to come back  
 Until I acquired the greatest abundance of good things (*agatha*).  
 For this reason I went on merchant ships (*ep' emporiëisin iōn*) in many a city  
 And I seized (*elëisamen*) sound and far-reaching wealth.  
 Surrounded by praise, I came back to my homeland after innumerable years,  
 And a delight I proved to be to my well-wishers.  
 And both the paternal house that was rotten  
 I made at once stronger out of new means  
 And, with the tomb having fallen to the ground, I built another one;  
 And while still alive I set up by the road this telling stele.  
 Would that my sons and grandchildren keep this house of mine so,  
 For I have accomplished these enviable deeds!

Enviaible, indeed. This is not the place to offer detailed analysis of this invaluable piece of evidence from the eastern fringes of the Hellenistic world. Suffice it to say that, keeping his cultural gaze fixed westwards, this Hellenized Indian managed to become part of nearly every single structural element of the Hellenistic economies that has been discussed in the present volume—joining, as he did, the shifting currents of population movements and wealth transfers; becoming part of upward socio-economic mobility abroad after having suffered a severe economic downturn in his home region; availing himself of the lucrative opportunities opened up by 'fruit-bearing' (literally: 'childbearing') money, no doubt loans; finally, using for many years the mode of 'the market' (*ep' emporiëisin iōn*) and—Odysseus-style—that of 'command' (*elëisamen*) in his almost Herculean effort to resurrect the prosperity of his household. Having acquired 'new means' through his labours in the West, he then made his homeward journey, his *nostos*. What might have instanced the ruin of an erstwhile thriving paternal house (an agricultural estate?) can only be guessed at. But for this man autarky seems to have ceased to exist as an option already at the moment he left his homeland in order to seek his fortune in the economies of the Hellenistic societies.

On this background, and in all modesty, one may answer the question with which we opened this Afterword in the affirmative: yes, we believe we have, quite far.

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